

October, 1960

the
**AMERICAN
SCHOOL BOARD
JOURNAL**
a periodical of school administration



how one district re-used high school plans:
economy with individuality

(see page 24)

You can do more with

DELTA



AT KENT STATE WITH DELTA

Shop teachers go to school



Delta expert shows how minor adjustments can help keep tools in top operating condition, prevent delays due to breakdowns.

DELTA PM SHEETS—Parts Maintenance Instruction Sheets are included with every Delta tool delivered—contain handy tips on routine machine care in addition to exploded diagrams for easy identification of parts. PM Sheets cover Delta's 63 machines, 302 models, over 1400 accessories.

Be Sure to Register and Vote!

Recently Kent State University conducted a School Shop Equipment Care and Maintenance Workshop as part of a graduate program in teacher training. Delta played a key part in this program by providing the assistance of two factory-trained specialists to act as "professors of machinery." Teacher-students were instructed in normal maintenance adjustments and repairs and given the chance to disassemble and reassemble equipment. By solving actual breakdown problems, teacher-students learned tool nomenclature, schematic interpretation and ordering of parts.

This is typical of the cooperation and service Delta has rendered in serving the school field for over 31 years. Your nearest source for the finest, safest tools your students can use—the same rugged, economical tools used throughout industry—is your Delta Distributor. He's listed under "TOOLS" or "MACHINERY" in the Yellow Pages. Call him soon . . . and for FREE Delta catalog write: Rockwell Manufacturing Co., Delta Power Tool Division, 408K N. Lexington Ave., Pittsburgh 8, Pa. In Canada: Rockwell Manufacturing Co. of Canada, Ltd., Box 420, Guelph, Ont.

DELTA INDUSTRIAL TOOLS

another fine product by

ROCKWELL





Johnson Control Systems Are Backed by the Largest and Most Experienced Service Force in the Control Industry

Efficient temperature control will be just as essential in your school in 5, 10, 20, or more years as it is today.

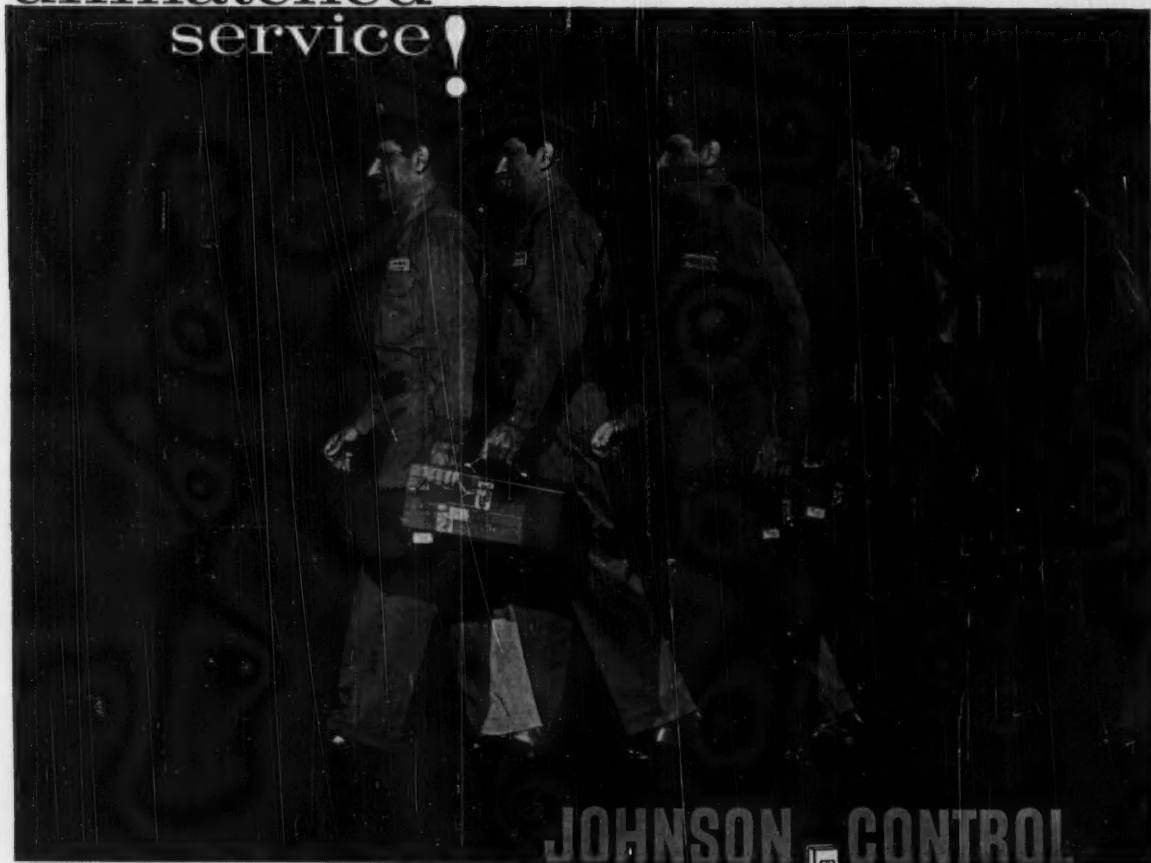
That's a key reason to specify a Johnson Pneumatic Control System when you build or air condition, for it is traditional Johnson policy that *future service is as important to your satisfaction as the original sale.*

That is why Johnson maintains the largest and finest service organization in its field. Full-time, factory-trained service mechanics are stationed in hundreds of cities across the nation. These maintenance and repair experts make it easy to keep your Johnson Temperature or Air-Conditioning Control System operating at peak efficiency throughout the life of your school.

When you own a Johnson Control System, you avoid the annoying delays, guesswork, and inflated costs of depending on non-specialists for service.

Unmatched service is just one of many advantages you get with Johnson Control. See your consulting engineer, architect, or local Johnson branch for details. Johnson Service Company, Milwaukee 1, Wisconsin.

unmatched service!



JOHNSON CONTROL

PNEUMATIC  SYSTEMS

DESIGN • MANUFACTURE • INSTALLATION • SINCE 1885



Goodyear XTRA GRIP gets school days started right—

with the 3'S's

SAFETY—SCHEDULES—SAVINGS

There's no room on the school bus for haphazard buying. Start-stops are a regular diet—and winter driving conditions unpredictable. That's why it pays to take advantage of all the Goodyear Xtra Grip tire offers—for safety, for keeping schedules, and for all-around savings.

Xtra Grip is the all-season "safety monitor." Its unusually broad, flat tread puts more gripping area on the road to stop skids, stop wheel-spinning—and just plain stop.

It's the tire that answers the school bell, too! With up to 35% more traction than conventional tires, Xtra Grip offers more bite in the mud, more cling on snow-covered roads—prompt delivery of stu-

dents before the bell sounds.

And Xtra Grip takes the honors for savings. New, toughened tread compounds deliver up to 40% more mileage than other tires tested. Backing up this tread superiority is Goodyear's unique 3-T Processed Cord (nylon or rayon) triple-tempered by Tension, Temperature and Time. You have the toughest tire bodies available—and a tire that's immune to most cord-failure problems.

Why not put your toughest-run buses on Xtra-Grip tires and see the difference in safety, schedules and savings. For less punishing conditions, other Goodyear tires are ready to meet your needs. See your Goodyear dealer today.



Xtra Grip
premium
all-season,
all-around
performer

Super Road
Lug
tops for off-
and on-the-
road use

Traction
Hi-Miler
quality leader
in over-the-
road field

Hi-Miler
Cross-Mile
long-haul,
mileage
champion

Lots of good things come from

GOODYEAR

Hi-Miler, Road Lug—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

MORE PEOPLE RIDE ON GOODYEAR TIRES THAN ON ANY OTHER KIND

the AMERICAN SCHOOL BOARD JOURNAL

Editor
William C. Bruce

Publisher
Frank Bruce

Editorial Director
Robert C. Bruce

Associate Editor Edward J. Pollock

Assistant Editors Anna Tompkins, Andrew J. Clarke

Washington Editor Elaine Exton

Circulation Manager M. J. Rutz

Advertising Production Manager Helen Smrz

New Products Editor Lois Lunz

Advertising Sales

MILWAUKEE 1, WISCONSIN

Frank Bruce, Gen. Sales Mgr.,
400 N. Broadway, BRoadway 1-9700

CHICAGO 6, ILLINOIS

James T. Callen, Adv. Sales Mgr.,
Thomas A. Barron, 20 N. Wacker Drive,
State 2-7530

NEW YORK 7, NEW YORK

Jack Faber or Charles J. Murray, 233 Broadway,
WOrth 4-4071

MIAMI 32, FLORIDA

J. Bernard Cashion, 904 Chamber of Commerce
Bldg., FRanklin 1-9941

LOS ANGELES 28, CALIFORNIA

Robert C. Whaley, Whaley-Simpson Co.,
6608 Selma Ave., HOLlywood 3-7157

SAN FRANCISCO 11, CALIFORNIA

Gordon Simpson, Whaley-Simpson Co.,
700 Montgomery Bldg., SUtter 1-4583

THE AMERICAN SCHOOL BOARD JOURNAL. Copyright, 1960, by The Bruce Publishing Company.—All rights reserved. Title registered as Trade Mark in the United States Patent Office. Entered as Second-Class Mail Matter, March 17, 1891, at the Post Office at Milwaukee, Wis., under the Act of March 3, 1879. Published on the 25th of the month preceding the date of issue by The Bruce Publishing Co., 400 N. Broadway, Milwaukee 1, Wis. (The Bruce Publishing Company founded in 1891 at Milwaukee, Wisconsin, with branch offices in New York and Chicago, is in no way identified with Bruce Publishing Co. of St. Paul, Minn.)

SUBSCRIPTIONS. In the United States, Possessions, and Canada, \$4.50 a year, payable in advance. Two-year subscriptions will be accepted at \$7.00. In all foreign countries, \$5.50, two years at \$9.00. Single copies, 75 cents. When you have a change of address kindly report it to us at once. Send us your old as well as your new address and be sure the Postmaster is notified. Postal regulations restrict forwarded service on magazines to two issues only. Notice of discontinuance of subscription must reach the publication office in Milwaukee at least 15 days before expiration date.



October, 1960

Vol. 141, No. 4

Planning School Board Meetings for Educational Leadership, DeLapp	15
How Business Co-operates with the Schools, Latham	17
Business-Education Day in Portland, DeBernardis and Leonard	19
Technology Is Revolutionizing Educational Administration, Mulford	21
Re-Use of Existing High School Plans: Economy Plus Individuality, Kennedy	24
The New Franklin Elementary-Junior School, Tink and Hamilton	28
Pre-stressed Concrete Saves, Kirkpatrick	31
Hamlet Elementary School, Baxter	32
Watch Out for School Buses!, McDuffie, Jr.	34
Notable New Schoolhouses	36
Pay As You Go Pays Off for Redondo Beach, Garen	37
Word From Washington: How's the Education Enterprise? Big and Booming, Exton	39
Johnson Service 75th Anniversary	46
Your JOURNAL for October, 6	New Books, 50
Surveying the School Scene, 10	Personal News, 54
NSBA Report, 12	New Products, 58
Editorials, 40	Reader's Service Section, 65

Mr. Stanley Buchacz, President of Justice
School District No. 109, Justice, Illinois, says:

**“Our teachers have found
with a thermostat**



Mr. Stanley Buchacz, in one of the classrooms in Justice Elementary School. A thermostat on the wall keeps the temperature just right for more take-home learning.

students concentrate better on the classroom wall"



Honeywell wall thermostats keep classrooms in Justice Elementary School uniformly comfortable. This makes for more take-home learning and prevents wasteful overheating.

"At Justice Elementary School, teachers never complain about classroom temperatures," says Mr. Buchacz. "That's because Honeywell thermostats call for just enough heat to keep each classroom comfortable. The temperature is always right for teaching and for learning."

Honeywell thermostats on the wall not only assure maximum learning, they also help keep fuel bills at a minimum. They keep temperatures in the classrooms at the precise level selected. There is never any wasteful overheating. And thermostats in classrooms not in use can be turned down to help reduce expenses.

In schools, the wall is always the best place for the thermostat. On the wall, it feels the temperature in the classroom the way the students do. It is also more convenient for the teacher to read and adjust to offset varying effects of weather, occupancy and student activities.

Your school will also benefit from Honeywell temperature controls. For complete information, call your nearby Honeywell office. Or write Honeywell, Dept. AJ-10-139, Minneapolis 8, Minnesota. In Canada, write Honeywell Controls, Limited, Toronto 17, Ontario.



This is the Honeywell Round, the world's most popular thermostat. It will enable your teachers to adjust temperatures to fit specific classroom activities.

Honeywell



First in Control

SINCE 1885

75th
PI
YEAR
ENGINEERING THE FUTURE

OCTOBER, 1960

(For more information from advertisers, use the postcard on page 65)

5

Modern as tomorrow!
...Priced for today's budget!

KRUEGER All-New FIBERGLASS CHAIRS



No. 3001 STACK CHAIR
Black or Chrome steel legs

STACK
THEM!
... for
storage

GANG
THEM!
... for
safety



No. 3201 ARM CHAIR
Black or Chrome steel legs



No. 3101 SIDE CHAIR
Black or Chrome steel legs

Curved and shaped to body contours, Krueger's Fiberglass chairs help raise the standards of seating comfort — add colorful warmth and beauty to any room setting. You can tell a Krueger chair by its rich, smooth finish — free from seat "bumps", because the leg attachments are molded-in as an integral part of the one-piece fiberglass body. These chairs offer seating flexibility, too, because you can stack or gang them (Model 3001) ... and mix or match their softly hued decorator colors of Sand Beige, Shell Coral, Evening Gray, Turquoise and Parchment.

UNSURPASSED FOR DURABILITY ...

Krueger Fiberglass is virtually indestructible, is color permanent and cleans like new. The strong tubular steel legs are wobble-free and built to last a lifetime! In short, these chairs are terrific ... and priced far below what you'd expect to pay for such permanent quality.

Write for colorful new descriptive brochure showing actual Fiberglass colors.



KRUEGER

METAL PRODUCTS • GREEN BAY • WISCONSIN

Your JOURNAL for October ...

If you found the building articles in the September issue helpful, you will be pleased with the nucleus of like reports in your October JOURNAL. Eight articles in all comprise the building section. Highlights:

1. The new Franklin Elementary-Junior School was built not exactly between rotting tenements, but it would have taken an imaginative poet indeed to glean inspiration for a pastoral elegy from that hillside. Inspiration was more suited for architects, and the product merits your scrutiny (pg. 28).

2. While Shakespearean scholars are pondering the delay in Hamlet, Amarillo school people are boasting the scaling in his structural namesake. Made in Texas for children, Hamlet Elementary School (pg. 32) makes sense.

3. In the age of the installment plan, "Get only what you can pay for now" is a principle attributed to an *ancien regime* and classed with old wives' tales and Tom Swift stories, but the Redondo Beach (Calif.) district tried it nevertheless. The result (pg. 37) is one very much respected by modern business minds, that is, simultaneous economy and production.

Other features:

You'll have to weigh the evidence presented on both sides of the case by your JOURNAL to decide your own policy regarding the operation of board meetings. Darwin DeLapp elaborates, you might say, certain points of an article in your JOURNAL for May, 1960, originally adapted as a speech by Superintendent J. H. Hull of Torrance, Calif. Local environment and experience should temper your decision as to your preference. If you didn't find Mr. Hull's article helpful, Mr. DeLapp's will be.

Two encouraging reports — from Sacramento, Calif. (pg. 17), and Portland, Ore. (pg. 19) — describe how the combined ingredients of originality and effort wafted the sweet smell of success into the business-education relationships atmosphere.

for November ...

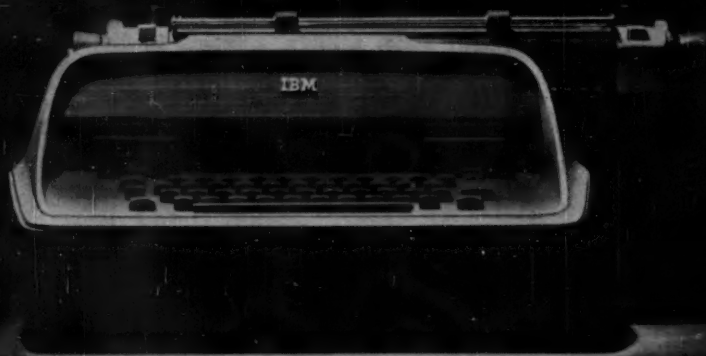
A penetrating discourse on discipline will be presented in two parts, the first in your November JOURNAL. Originally an address to a group of school principals, the discussion contains a world of valuable counsel stemming from a critical analysis of the author's own experiences as a principal.

The Editor

OUR COVER ...

The re-use of existing school plans is a practice not totally unfamiliar, perhaps, to architects, although the admission of it as such is. Read the report on page 24.





The IBM Electric: Its beauty is just a bonus

The first thing you notice about the new IBM Electric is its good looks. But there's more. For here is beauty combined with precise function, the result of the most thorough approach to typewriter development ever devised.

It is one of the most perfectly engineered quality products in the world. Every part is made a little stronger, a little better than it has to be. As a result, you can expect less "down time," teacher's schedules can be maintained, and students need not feel the demoralizing effect of wasted classroom time.

Simplest keyboard. The many exclusive features on the IBM Electric can help students raise their standards of performance. For example, a whole new principle, the "Buoyant Keyboard," enables the student to adjust key pressure to his individual "touch," thereby reducing finger fatigue and helping him develop increased confidence and skill. The keyboard itself is the essence of simplicity and no unnecessary gadgets intrude on the student's finger action, making both teaching and learning easier.

Educational Aids. In our desire to further share the responsibility for the success of each typing installation, IBM offers lesson plans, movies, bulletin board materials, and other educational aids, and a staff of consultants and business educators is available to provide assistance when desired.

If you would like to know more about this superb typewriter, our local representative would be pleased to show it to you at your school.

IBM

ELECTRIC TYPEWRITER DIVISION ©

Imaginative Engineering Puts to Work on **DAYLIGHT**



Mike Best and Ed Kralovec, mechanical engineers on the Madonna school, shown discussing job details with two of their colleagues.

Kralovec & Best, consulting engineers, went one step further in their heat and ventilation design for the new Madonna High School, Chicago — they applied pneumatic control to skylight louvers.

To meet the lighting requirements of the combination auditorium-gymnasium, architect C. I. Krajewski used a system of sky domes equipped with adjustable light dampers. How to control the dampers quickly and efficiently for change-over from plenty of daylight for gym activities to total blackout for movies, etc., was the problem presented to the consulting engineer.

Kralovec & Best's solution was — twenty-nine 4-inch powerstroke piston damper motors — one for each of



Sky domes, inside and out. Each contains a set of light dampers, all of which operate simultaneously when darkness for movie showings is desired in the combination auditorium-gymnasium.

Powers Pneumatic Control



MADONNA HIGH SCHOOL Chicago, Ill.

Architect: C. I. Krajewski, Chicago
Consulting Engineers:
Kralovec & Best
Chicago
Heating Contractor:
Windsor Heating Co.
Chicago

the sky dome louvers on the roof — energized instantly from a single Powers pneumatic selector switch in the projection room. Turning the switch activates air pressure at 15 psi. through a Powers Series 500 Pilot Valve to the motors to close the light louvers. When the switch is turned off, pressure is released . . . and the louvers swing open to admit light.

Pneumatic control of daylight in Madonna school is fast, easy and quiet — a definite convenience for the projectionist or instructors, an operational bargain for the school, maintenance-wise.

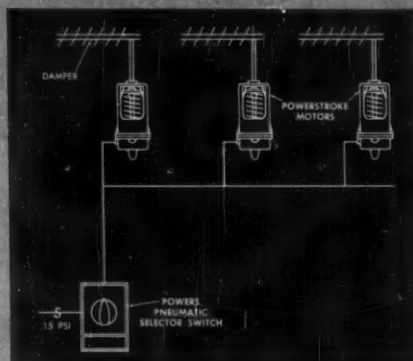
The complete heating system, as specified by Kralovec & Best, includes two hot water converters controlled at fixed temperatures. Individual classrooms are heated and ventilated by unit ventilators, controlled on the standard day-night cycle. Corridors, rest rooms, storage and locker rooms employ direct radiation controlled by Powers Day-Night room thermostats. For extra safety and comfort, hot water to all showers is controlled by means of a Powers Hydroguard Thermostatic Shower Control.

Here, then, is how imaginative engineering applied to pneumatic control can have unusual — but practical — results in an efficient, low cost system.

*Write for the latest Powers Catalog
of pneumatic controls for schools.*

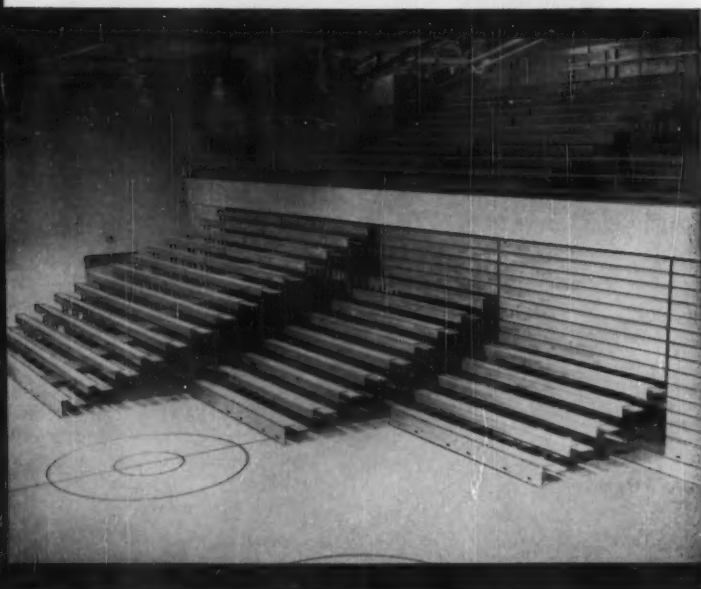


A single pneumatic selector switch in the projection room actuates 29 sets of light louvers through 29 individual powerstroke motors.



THE POWERS REGULATOR COMPANY
DEPT. 1060—SKOKIE 3, ILLINOIS | Offices in Principal Cities in U.S.A. and Canada
MANUFACTURERS OF THERMOSTATIC CONTROLS SINCE 1891

get versatile gymnasium seating for your new or present school building



SAFWAY

TELESCOPING GYM SEATS

permit quick, easy set-up changes
for every gymnasium event

YOU CAN assure profitable *full-time use* of your school gymnasium—planned or existing—with this modern equipment, available in recessed, wall-attached, movable and reverse-fold types. Seating set-up changes are made quickly to fit every event. Any number of rows can be locked open (*see photo*). Safway telescoping gym seats give you these practical advantages:

SPECTATOR COMFORT—Good sight lines from every seat. Ample foot and knee room; comfortable inclined seats.

COMPLETE SAFETY—Full protection for spectators, gym users and maintenance personnel.

FLOOR PROTECTION—Non-marking wheels roll in separate tracks to prevent grooving.

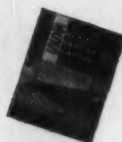
EASY OPERATION—Straight-line tracking with extra-large wheels and nylon glides. Motorized operation available (not needed under 14 rows).

GOOD LOOKS—Seats nest back into a handsome vertical cabinet. Safway's rich, warm Golden Oak finish will be in harmony with any interior.

SAFWAY



SAFWAY STEEL PRODUCTS, INC.
6228 W. State Street
MILWAUKEE 13, WISCONSIN



**WRITE FOR
BULLETIN
1610U**

SURVEYING THE SCHOOL SCENE

TWO MILLION MORE IN SCHOOLS

The Office of Education has estimated that school enrollment from kindergarten to college will reach a record high of 48.65 million this year, a four per cent increase of two million over last year. Commissioner of Education Lawrence G. Derthick estimated that 1.636 million teachers will be needed. The increase from kindergarten through high school is a result of the mounting birth rates since World War II, a factor, however, which has not yet had time to affect enrollment in the colleges, where the increase (from 3.75 to 3.98 million) is attributed to a growing interest in higher education. The figures are expected to add to the demand in Congress for federal aid to school construction.

SCIENCE SURPLUS SUPERMARKET

Science teachers picked up \$60 million worth of classroom equipment from the government's surplus pile, according to Arthur S. Fleming, secretary of Health, Education, and Welfare.

He pointed to the establishment of a chain of 20 supermarkets at defense installations around the country where science teachers shop through a vast array of electronic, communications, and photographic components to use in classrooms. Some states send trucks to the supermarkets on sale days to purchase equipment that they could not afford otherwise. The Department of Surplus Property has issued a guide for science teachers, listing items available.

FOUR-QUARTER SCHOOL YEAR

A four-quarter school year has been recommended to the Sequoia union school district, Redwood City, Calif., by a citizens' committee, headed by Mrs. Helen A. Kerwin, a member of the Sequoia union high school district board of education. The district, which operates five comprehensive high schools in a large area, is confronted with sharply rising costs, growing school enrollment, and difficulties in adjusting the tax rate to the changing costs. The four-quarter plan, which the committee admits has disadvantages, would increase the capacity of the present school plant by at least 28 per cent and would allow gifted students to advance more rapidly in their education, while slower students would do makeup work during the fourth quarter. The committee feels that in the Sequoia district only one additional school building would be needed by 1970.

PITTSBURGH'S PROGRAM FOR BRIGHT CHILDREN

A far-reaching theory that good students can learn more and faster with greater challenges is being put into practice in September at the Schenley High School.

The program conducted in the Oakland School is intended not only to improve Schenley but to demonstrate to all schools in the area what can be done.

Under the program, some students will go to the University of Pittsburgh full and part-time; others will take college-level courses; some faculty members will teach at Schenley. Elementary students at the Frick and Falk schools will take high school courses, and some Herron Hill

(Concluded on page 55)

FASTEST, SAFEST WAY

TO GET UP IN THE AIR

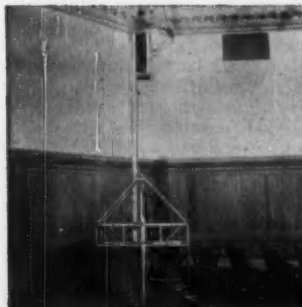
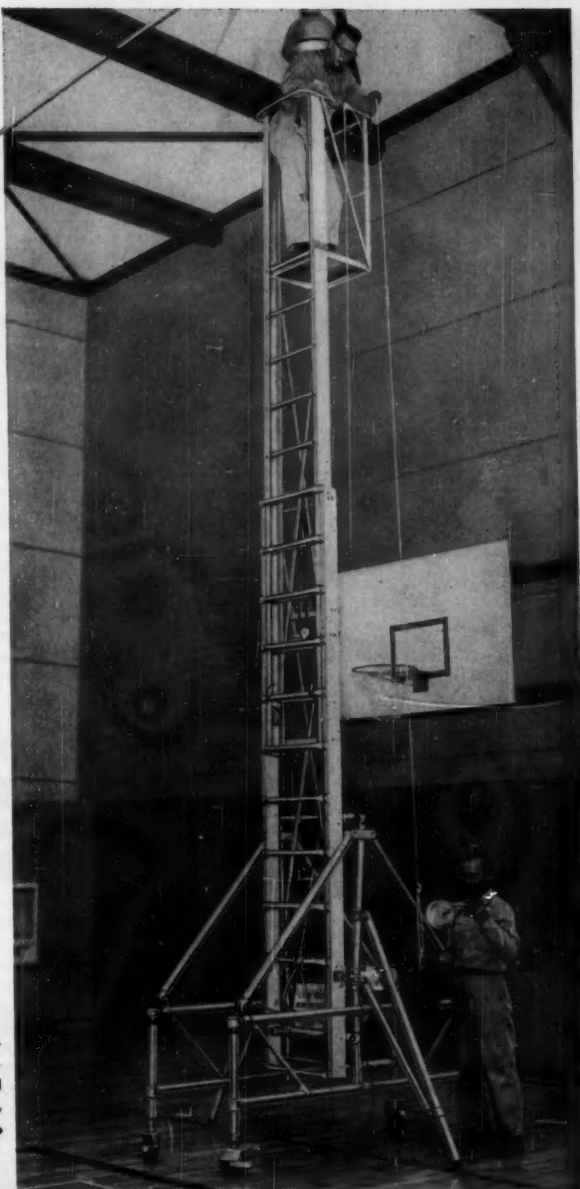
FOR OVERHEAD

SPOT MAINTENANCE

ALUMINUM TALLSCOPE

Telescoping aluminum tower on wheels extends instantly for reaching heights up to 30 feet. Rolls quickly to the job. Folds down to pass through doorways and under trusses. Has safety tread ladder and enclosed platform. Conforms to rigid Industrial Safety Codes. Lightweight, rapidly assembled by one man. Adjustable legs for uneven floors or stairways.

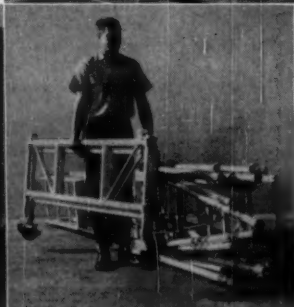
Tallescope speeds up installation and maintenance of overhead lighting, acoustical tile, heating and other facilities at each of 7 junior and senior high schools and colleges in the Stockton, California, Unified School District.



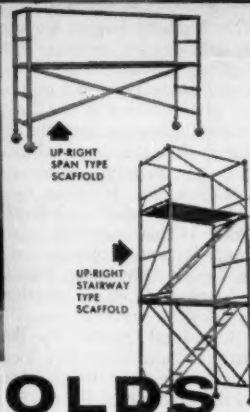
Bridges over auditorium seats. Note one-man operation.



Rolls through doorways. Telescopes and folds down; only 28" wide.



Separates easily into 3 components for convenient storage or transportation.



For TALLESCOPE
circular write to

UP-RIGHT SCAFFOLDS

DEPT. 171, 1013 PARDEE, BERKELEY, CALIF.

In Canada: Up-Right Scaffolds Ltd., 120 Russett Ave., Oshawa, Ontario

State Leaders School Themselves At Regional Workshops

MAXINE PINSON

Editor, NSBA Publications

Seeking information and methods to strengthen the work of state school board associations, Southern, Central and Western region leaders met for regional workshops in June and July. The Southern Region met in Daytona Beach, Fla., June 8-10; the Central Region at Joplin, Mo., July 14-16; and the first Western Region at Wagoner, Okla., July 18-20.

All three workshops reflected a growing awareness that a well-planned program, checked in operation by constant evaluation, is basic to productive school board association work. This theme threaded its way, directly and by implication, through speeches and discussions at all of the meetings. If a working formula could be developed from suggestions put before the workshops, it might be to (1) *analyze*, (2) *plan*, and (3) *evaluate*. The fourth step, logically, would be to correct or change the course of action if a program is not working; or continue and strengthen the program if it proves effective.

Local Control Examined

The Southern Region workshop heard a straightforward message from Dr. R. L. Johns, outstanding authority on school finance and head of the Department of Education at the University of Florida. Pulling no punches, Dr. Johns declared that the responsibility for the quality of education, under our system of local control, is borne by the local board of education and local superintendent. If this system is to survive, he warned, it cannot operate on a hit-or-miss, *laissez-faire* basis. The real issue, Dr. Johns declared, is whether we will have local or central control, and we can lose local control by default. In illustrating how ineffective local control can write its own death sentence, he cited the example of Puerto Rico, which abolished the local school board system because it failed to function adequately.

Dr. Johns cautioned that we probably

could not retain our democratic society as we know it if a centralized school system were adopted. If we are to retain the advantages of local control—particularly the provision for experimentation and freedom of choice consistent with our democratic way of life—symptoms of weakness in our educational system must be corrected.

Organization Encouraged

Encouraging developments that should be supported and strengthened, according to Dr. Johns, include the growth of state school boards associations, the National School Boards Association, the American Association of School Administrators, and the formation of both lay and professional committees which establish confidence in one another.

Jerry R. Cordrey, of the American Farm Bureau Federation, spoke to the Southern Workshop on "Developing Policy within the Association." He illustrated the "grass-roots" method of policy development as it is utilized by the Farm Bureau to keep bureau policies fertilized by viewpoints from the field.

Dr. Harold V. Webb, NSBA associate executive director, shared with the Workshop his understanding of "Qualities and Skills which State Association Leaders Need." He said that, after finding persons of genuine leadership ability, we must then provide them with information, special helps and pooled "know-how." He stressed the need to measure the effectiveness of our orientation programs for school board members and to uncover new and more effective techniques of helping members in their tremendous task.

Both the Central and Western groups delved into the problem of involving more of the members in association activities. Richard Brown, executive secretary of the Nebraska State School Boards Association, spoke at both meetings on this topic. He emphasized especially the fact that involvement cannot

be left to chance. It must be planned. Activities must be meaningful and members must realize the significance of their participation in order to respond with time and serious efforts. Max Wenrich, president of the Kansas School Boards Association, cited as an example of meaningful, positive involvement the work of board members cooperating with administrators and laymen in completing the Kansas Comprehensive School Survey.

PR Counsel

Speaking to the Western Workshop, David Johnson, editor of the *Nowata* (Oklahoma) *Daily Star*, said that in far too many communities there is a lack of cooperation between the press and the schools. "Educators charge that the press seeks to report the bad news in preference to the good. The press, on the other hand, charges that schools seek to exploit the good news while hiding the bad." Neither side can be all right or all wrong, he reasoned, while urging that every school system should assign a qualified person the responsibility of public relations. He continued, "School news can be made interesting without being sensational. It can be sober reporting and still be interesting. It can be thought provoking without being colored."

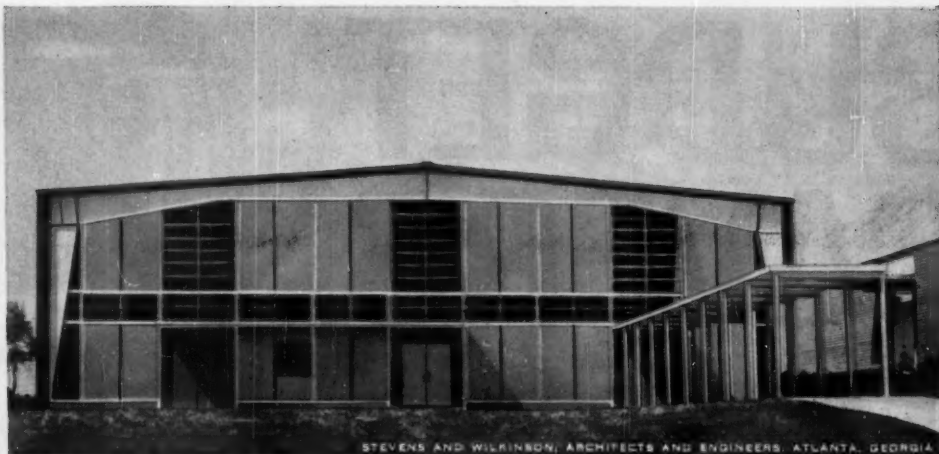
The central Workshop heard Robert Cole, executive director of the Illinois Association of School Boards, explain the Illinois way of program building. Illinois, he reported, is divided into seventeen sections. One member representative from each board within each of these divisions meets with a state association staff member. Suggestions gleaned from these meetings are forwarded to the association staff and board of directors, who consider them in formulating the Association program. Then the process is reversed, and the suggestions are turned back to the division meetings for further deliberation and recommendations. This two-way process keeps ideas percolating from local boards to the state association and back again.

Regional Chairmen

J. T. Hatcher, executive secretary of the Kentucky School Boards Association, served as chairman of the Southern Workshop. Dr. James Hart, executive secretary of the Missouri School Boards Association, was chairman of the Central Region meeting; and J. Orville Bumpus, executive secretary of the Oklahoma State School Boards Association, the Western Workshop.

Next year, the Western Region will meet in Wyoming, the Central in Kansas, and the Southern at Daytona Beach, Fla., again.

Complete, detailed reports of all three meetings will be mailed from NSBA headquarters to all executive secretaries and presidents of all state associations of school boards. Careful evaluation of these reports can be beneficial in future planning of regional meetings of state school boards association officers and directors. ■



STEVENS AND WILKINSON, ARCHITECTS AND ENGINEERS, ATLANTA, GEORGIA

A BUTLER BUILDING EXCLUSIVE...CHOICE OF TWO SUPERIOR WALL PANELS IN COLOR



Better-than-ever Butler buildings ...bring a new look to gyms

A glance at the gymnasiums above shows you why Butler buildings have been so widely used in this type of construction.

Interiors are spacious, clear and unobstructed. Exteriors are simple but pleasing... lend themselves to a wide variety of architectural treatments. This, plus the inherent economies of Butler pre-engineering and mass production, has all contributed to the increasing use of Butler buildings for gyms.

And now, with two new cover panels to choose from, Butler brings a new look to gyms... sets a new standard of quality for pre-engineered construction. Butlerib is the strongest, the most rigid—most weathertight cover ever offered as standard construction on Butler buildings. Monopanl, Butler's pre-

mium cover, is the first factory-fabricated, factory-insulated panel designed for a pre-engineered structural system. With Monopanl, exterior walls are complete inside and out, go up faster... provide greater protection.

Both Butlerib and Monopanl feature unique, distinctive corrugations that create bold, beautiful sculptured outside walls with pleasing shadow lines.

Exclusive with Butler, these panels are available in a selection of attractive, factory-applied colors or in a natural aluminum finish.

There's no doubt about it! Better-than-ever Butler buildings do bring a new look to gyms. For full details consult your Butler Builder today. He's listed in the Yellow Pages under "Buildings" or "Steel Buildings." Or write direct.

BUTLER MANUFACTURING COMPANY

7311 East 13th Street, Kansas City 26, Missouri



Manufacturers of Metal Buildings • Plastic Panels • Equipment for Farming, Transportation, Bulk Storage, Outdoor Advertising Contract Manufacturing • Sales offices in Los Angeles and Richmond, Calif. • Houston, Tex. • Birmingham, Ala. • Kansas City, Mo. • Minneapolis, Minn. • Chicago, Ill. • Detroit, Mich. • Cleveland, Ohio • New York City and Syracuse, N.Y. • Washington, D.C. • Burlington, Ontario, Canada

BUDGET SAVERS THAT STRETCH SCHOOL DOLLARS



TRANSPORT*

ALL TRACTION*

*FIRESTONE T.M.

FIRESTONE MATCHES BUS TIRES TO SCHOOL TRANSPORTING JOBS FOR LOW COST PER MILE

For city stops-and-starts, for muddy country roads, Firestone school bus tires are designed to do their specific job for fewer budget dollars. For economical improved road service, get Firestone Transport tires—long proved on the nation's biggest truck and bus fleets. For traction in any weather on any road, buy the Firestone All Traction. Every Firestone school bus tire is built with Firestone Rubber-X, the longest-wearing rubber ever used in Firestone tires. Firestone Safety-Fortified cord resists curb-scuffing and impact damage. Together, they give maximum original tread mileage plus extra money-saving retreads! Ask about Firestone school bus tires at your Firestone Dealer or Store—and always specify them on new buses.

Firestone

BETTER RUBBER FROM START TO FINISH

Copyright 1960, The Firestone Tire & Rubber Company



October, 1960

Planning School Board Meetings for Educational Leadership

Since the war rapid changes have characterized much of the American way of life. Atomic energy for peaceful uses as well as a means of mass annihilation, a standard of creature comfort surpassing that of ancient royalty, the unabated population increase, the technological explosion, and the terrific growth of all knowledge have combined to usher in the space age. Not silently or unannounced, but relentlessly, these changes leave humanity with less and less comprehension of what is actually happening to the world. Furthermore, business life, governmental concern, and international relations can be expected to become even more complex.

Elected officials charged with the responsibility of establishing policies for the operation of school districts throughout the country — setting the goals, the priorities, the very mental, moral and physical milieu of the schools — recognize the need for a flexible approach to the rapidly changing face of our environment. To take a concrete example from the three R's, the overriding importance of a powerful command of the English language spoken and heard, written and read, exposit and understood, gains wider acceptance daily. For words comprise the symbols of abstract thought, the very foundation and framework of intellectual endeavor. The hierarchy of subjects may be declining, but a clear priority of emphasis in academic development is beyond dispute. Similarly, the ability to converse in a foreign language as well as to read it becomes a more integral need of our culture as so-

DARWIN DeLAPP

Member, New Canaan, Conn., Board of Education

A discussion of how to improve school board meetings,
the instruments of all policy modification,
written as an extension of a previous article on the subject . . .

cieties that were formerly islands widely separated approach interdependence.

The Instrument of Policy Making

A firm resolve to incorporate needed innovation into public education is an important job for readers of the *SCHOOL BOARD JOURNAL*. But resolve will falter without fruition unless focus is drawn on the instrument of all policy modification — *the school board meeting*. Leadership or apathy emanating from this source permeates all aspects of a school system.

An article by J. H. Hull, superintendent, Torrance, California, in the May, 1960, issue, has prompted the present writer to bring this responsibility to the reader's attention. Several recommendations in Mr. Hull's checklist "Tips for Better Board Meetings" emasculate a board's policy-making machinery. The following is a quotation of Item No. 25:

As secretary to the board, the superintendent sets up, prepares, and determines the agenda. Board members sug-

gest items from time to time. Sometimes the superintendent puts them on now, sometimes later, sometimes not at all.

Who is in charge here, the superintendent as secretary? This is patently a poor way for any board of education to run a school system. Policy formulation is composed of two principal elements: first, the determination that a policy is to be established to guide the administrator of a particular area; and second, arriving at the decision of what that policy shall be. The superintendent as the chief executive of the board then administers both the intent and substance of the policy. This is not to say that the superintendent does not have the privilege, even the obligation, of pointing up the need for guide lines, preparing a proposal for consideration, and adding his wisdom to the deliberation. However, he should never hold veto power on a new policy by omitting an item from the agenda. If the topic is inappropriate, in itself or at a particular time — and no doubt many suggestions are inappropriate for full board discussion

—deletion should be made by the board itself.

Board Must Retain Responsibility

Whenever a governing body permits any other person or agency to usurp the power of determining whether or not a policy formulation is desirable, it is guilty of failure to discharge responsibly its duties of public office. Think for a moment about an analogy from business practice. Here competition demands speed and flexibility in the decision-making process. The board of directors of a corporation would not be fulfilling their proper function if they acted only on matters brought to their attention by the salaried management. The reason they were named directors in the first place was because they had the breadth of vision and objectivity to request data on subjects vitally affecting the company's business but as yet not recognized as relevant. Their job is to act as creative individuals, not automatons. And so with school boards: were they simply to preside over the status quo in a period of educational ferment, real progress would be a rarity when desperately needed.

Another rule (No. 27) prescribed by Mr. Hull seems very unbusinesslike: "No advance agendas should be given to either board members or newspapers."

Who then is to be in the know? Presumably only the superintendent because, if his staff or friends were let in on the secret, the word might leak out and give an unfair advantage to a privileged few. What has happened to the principle "Open covenants openly arrived at?" If there is a complex issue on the agenda every conscientious board member wants the opportunity to check his own references and quietly reflect upon the matter. It is possible then, and only then, to arrive at pertinent understanding of a question or a problem, before a decision is rendered. Occasionally the facts are already known. In such a situation a board member has time to develop a considered opinion and to prepare a succinct, forceful presentation of his position.

Obscurantism has its effects, furthermore, on the interested citizens of the community, who also have the right to know what is going on at school board meetings. Naturally this writer assumes that the meetings are open to all except for rare executive sessions when individual personalities are discussed. An informed public should be encouraged to attend, and the best encourage-

ment possible is the knowledge of what is to be on the agenda.

Committees Held Desirable

Recommendation No. 12 in Mr. Hull's article is a well nigh foolproof method of reducing accomplishment: "No committees should be tolerated in any form, either standing or special."

There have been many arguments against establishing permanent committees, such as a "Personnel Policies Committee" or a "Finance Committee." These subcommittees of the board are charged with the responsibility of specializing in a given area and of bringing their recommendations for action to the full board for final adoption, rejection or modification. But never before has this writer heard a serious challenge to the wisdom of appointing *ad hoc* committees for studying in depth special problems. The selection of school sites, the review of a total physical fitness program, or the proceeding with negotiations to achieve an equitable teacher salary schedule: all these projects seem appropriate for subcommittee attention. If it is not necessary or desirable to delegate the authority for final decision to the working committees, the board as a whole can reject or accept the recommendations and the report as it sees fit, but surely the conclusion arrived at as a result of the spade-work will expedite the policy-making process of a board of education. As a matter of fact the three projects listed could be undertaken simultaneously by a nine member board, particularly if qualified citizens were also called in to serve with the board members.

Merit Plan

Taking this discussion out of the abstract, let the writer recount the birth of a "Merit Evaluation Plan" in his own community, a system that has contributed spectacularly to improved classroom performance. It happened that as the school population in New Canaan rose rapidly in the early fifties, teaching services were in strong demand, and the salary schedule had fallen behind until it neither satisfied the professional staff nor attracted talented new people. While this situation was not unique, the manner of resolving the problem was quite different from the usual. A salary committee composed of board members, teachers, and citizens was appointed to work out a plan that would have the support of the staff, meet the requirements of the school board, and be acceptable to the town board of finance and the

taxpayers. In due time this committee reported with the following recommendations:

1. The salary schedule should be increased materially, implemented by three pay raises over the next three years.

2. Increases for teachers serving more than nine years should be subject to a classroom performance rating of "excellent."

3. The criteria for measuring classroom performance should be subject to revision should unforeseen inequities become apparent.

The report was well documented with data from other professions, and a copy was presented to each board member for review. After a period of discussion, the recommendations were adopted in turn by the board of education, the teachers association, and the board of finance and supported by the citizenry as part of the total town budget. This writer is morally certain that this powerful influence for quality education could not have been brought into existence by the board operating only in full session nor, on the other hand, without the individual leadership of several of its members.

Thus it can be seen that the composition of the agenda, the determination of ways and means for obtaining facts or accepting new ideas, whether from the administration or through committees charged with a single task, can be powerful instruments in streamlining the policy-making function vested by the electorate in its board of education.

Agenda Items

The items presented on the agenda deserve special attention. Ordinarily they seem to fall into three major categories: (a) budgetary considerations for the ensuing fiscal year; (b) problems arising from the day to day operation of the school system and brought to the board by the superintendent for information or action; and (c) broad policy deliberations.

In this last category might be mentioned such topics as:

The Social Studies Curriculum for Grades 7-12, Health Services Provided by the School System, and Comparison of Dr. Conant's Recommendations with Current Practice in the High School.

Such a group of topics can be programmed into the schedule of meetings throughout a year.

The chairman might request the members at the June meeting to submit by August 15 suggested review subjects to the superintendent of

(Concluded on page 63)

The following two articles show smart steps toward ideal business-education co-operation:

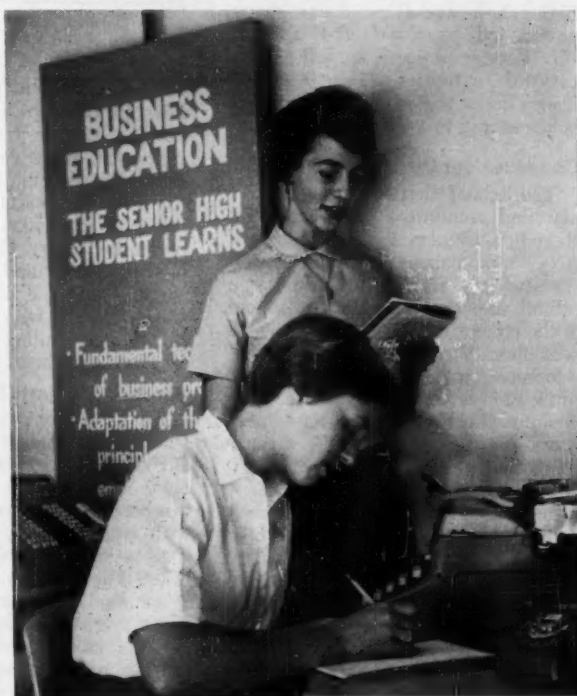
- (1) latest teaching "fashions" in show windows
- (2) the gray flannel suit goes to school

Window-shoppers found the biggest sale of the year

How Business Co-operates with the Schools

GLADYS LATHAM

Consultant in Radio and TV Education
Sacramento, Calif., Schools



"I'm going to add the mixed numbers $3\frac{1}{6}$ and $4\frac{1}{6}$. First I add the fractions $\frac{1}{6}$ and $\frac{1}{6}$, that's $\frac{2}{6}$. Now I add 3 and 4 and that gives me $7\frac{2}{6}$, but $\frac{2}{6}$ can be reduced to $\frac{1}{3}$ so my answer is $7\frac{1}{3}$."

Sounds like a classroom arithmetic lesson, doesn't it? Well, it is a lesson, but Betty, her classmates and teacher are holding class in one of the windows of a downtown department store in Sacramento, Calif., not only today but for a ten-day period, and several times a day in this recently inaugurated annual program.

"Fantastic," you say. So it seems but, nevertheless, it is a reality — hundreds of shoppers each day may see a class in action.

This back-to-school promotion, without a doubt one of the most interesting and unusual projects ever carried on by big business, will call the attention of the tax-paying public to what is actually happening in the classrooms. Here passers-by stop

to see and hear how children today are being taught at various grade levels. They may also see the textbooks and other instructional materials used, as well as the methods employed. Besides the live classroom lessons, there are many "stills" to see. Finished projects in the various subject fields are displayed. The viewer gets quite a complete picture of what actually goes on in the child's "Work-a-Day" world, his classroom.

Many stores in different parts of the country occasionally have displays of classroom work — objects made in the industrial arts classes or dresses made in clothing classes. But it is doubtful if there is any other place on the Pacific Coast that gives over all their window display space for regular class lessons and on the week before the opening of the fall school term.

Idea Came From Business

The idea for the project came from

Business. Two years ago, W. J. Ahern, vice-president and general manager of Hales Sacramento Department Store, approached Dr. William Burkhard, superintendent of the Sacramento City Unified School District, with an idea for a school project — both live and still — to be presented in the windows of the store. Two hundred and eighty feet of window space would be devoted to this presentation, details of which would be figured out by school personnel working with the display staff of the store, and in close co-operation with Mr. Ahern and Keith McKee, sales promotion manager and advertising manager.

The basic idea of the presentation was that viewers would be looking through the classroom windows of a school at displays, regular class lessons, and demonstrations. These were to be at all grade levels from kindergarten through college. The time Mr. Ahern offered was the ten-day period

before the opening of the fall school term when all the stores in the country were making a pitch for the retail trade on "back-to-school togs." The time offered coincided with the time of the California State Fair, an annual affair in Sacramento. Each year, at this time, thousands of visitors flock to California's capital to see agricultural exhibits, the finest livestock in the West, horse shows, animal judging, and Four-H and Future Farmer projects, as well as educational activities. The spectacle brings many thousands because there is something to appeal to everyone.

Committee Set Up

The school department set up a planning committee of which Jack Reynolds, Supervisor of Industrial Arts, was named chairman. Don Gaustad, an art instructor, became exhibit director. The other members of the committee were the staff members directly concerned with the development and application of the curriculum in the classroom: the curriculum director and subject supervisors and consultants at the various grade and subject levels.

The theme chosen by the committee was "The Scientific Age and Youth." Live science and arithmetic demonstrations were set up. These were carried on several times during the day and on the two evenings when the stores remained open. The elementary grades, working at different grade levels, demonstrated air pressure; junior high students did experiments with electricity; dentistry and rocketry were featured by the senior high students; and the City College spent their efforts on chemical laboratory techniques.

All plans were laid before the close of school in June, but much work was done during the summer to get the basic background ready. Students and teachers selected in May or June were alerted for appearance in the middle of August. The Coordinator of Publicity and the Consultant in Radio and TV Education were called in to the committee to take care of publicity. Hales very generously underwrote cost of the entire project.

Meetings were held throughout the year and possible teacher participants were carefully observed and screened during that time. A teacher to "teach in a fish bowl," so to speak, must possess many qualities. He or she must have great stamina; love children; know the subject completely; have a clear and interesting way of presenting subject matter; have a pleasing, outgoing personality and a pleasant voice; be able to think on

his or her feet; and be baffled by absolutely nothing.

Permanent Theme Adopted

Last year a permanent theme, "Through the Windows of Your School," was adopted. At that time the large corner window featured a fifth grade arithmetic class in action. This year that window will show primary children at work in language arts. The teacher will have some reading each day as well as oral work. The viewers will be able to see an enrichment program, showing how to develop work-attack skills, how youngsters learn to spell, and how creativity is developed. In short, they will see children gain skills in the art of communication by reading, oral expression, and written experiences. Harry Champas, a junior high school art and crafts instructor, is this year's exhibit director. He works closely with all participants, occasionally calling a meeting to tie all parts together.

Variety of Subjects Displayed

An art lesson with a sixth grade teacher and student using the different media of art expression will occupy one window this year. The teacher says his students will work with water color, crayons, paper sculpturing, and paper and tile mosaics. This they will integrate with social studies, science, and the language arts. Observers will be able to see the child's creativity and self expression developed.

The Home Economics department, using the shadow box windows, will feature "Trouble Shooters in Sewing." The women viewers will see how our girls learn to give the finished look to "created-at-home" garments. Hints on pressing, preparation of materials before cutting, precautions to take when buying yardage, and the importance of reading information on tags and labels will be stressed.

To show how all the children of the district are taught, a special education class will be presented. The spectators will watch a teacher working with a class of deaf children; they will see the equipment used and the techniques employed by the teacher.

The Sacramento city schools are very proud of their library set up. In one window two fourth-grade youngsters will explain the use of a library to viewers, who will learn the use of the card catalog; the meaning of the Dewey decimal system; and the location of books for information, fun, and pleasure reading. One little boy will show how to give a live book review using puppets.

Youngsters in Seventh Grade Arithmetic will be using adding machines in their class. The adding machine presents a new technique in giving youngsters a better understanding of the number system.

School, Store, Community Co-operate

The store and the school department worked closely on publicity. Each day, during the exhibit, the store's advertisement in the local papers carried sketches and some information about the exhibit. One paper carried a feature article with a picture. The news departments of the local television stations presented pictures on their news telecasts. One local television station gave a half hour of their public service time to show several of the lessons as given in the windows. Classrooms were set up in the studio to make the picture real.

Teachers, working with supervisors and consultants, select the type of lesson to be presented, the materials to be used, and the children to participate. They also secure parental consent for appearance of children in the windows, provide transportation to and from the store and provide supervision while students are at the store.

To say the project was a success is to put it mildly. Every day great crowds of citizens watched and listened to the lessons given over loud speakers set up outside the windows. Many of these people had not been in a classroom for twenty or thirty years; they were learning how education "operates" today. The store and the schools were extremely happy with the experiment and with the tremendous reaction of the public.

After the project was over, Hales invited the personnel to a luncheon in a local hotel. Here was held what might be called an evaluation session, in which the project was viewed from many angles. Retrospect proved pleasing and, also, provocative of many ideas and suggestions for the next year's display.

Keeping the public closely informed as to what's happening in the schools is an important factor in putting over school bond elections. This exhibit was a big factor in helping the district win bond elections when many neighbors failed with theirs. Sacramento's answer is a strong and definite "YES" to the question Does Business Cooperate With Our Schools?

And, let it be added, business says "Yes" to the benefits accruing to them from this community project.

Business-Education Day in Portland

AMO DE BERNARDIS and JESSE E. LEONARD

The experts said it couldn't be done—a thousand businessmen could not be drawn to the Portland elementary and secondary schools on Education-Business Day. But the Portland Public Schools and the Chamber of Commerce set out to prove the experts wrong. The result: 975 men and women from business and industry visited the Portland schools, E-B Day, April 20, 1960.

How it was done is a story of cooperation between Chamber of Commerce officials, school administrators, and the 100 schools that provide the public education for some 75,000 Portland children and youth.

Business-Education Day had its beginning in Portland in 1951. At the outset the teachers visited industry and business. Visits to the schools by businessmen was not a part of the program. Later, educators and businessmen felt that if the full value of Business-Education Day was to be achieved, visits to schools by businessmen was a "must." The ensuing results, however, had not been encouraging: in 1958 only 187 businessmen visited the Portland Public Schools when the opportunity was provided.

This year a general feeling permeated the thinking of Chamber and school officials that, unless more business people could be induced to visit the schools, the project should be dropped. Accordingly, at the first meeting with the Chamber committee early in March, school representatives made suggestions for improving the participation. Generally, the

Dr. De Bernardis is assistant superintendent and Mr. Leonard is supervisor of special projects in the Portland, Ore., Public Schools.

schoolmen suggested that in addition to a letter of invitation to each Chamber member a new procedure should be tried. This plan provided that the staff of each school should invite the businessmen in its area; teachers, two or three in each school, should write to the business firms which they had visited the previous year, inviting personnel to visit their school; and an attractive promotion sheet, complete with pictures of school activities, might accompany the Chamber president's invitation.

A representative of the Chamber of Commerce volunteered to send out invitations to local booster organizations that might not be Chamber members. A telephone committee was organized to call business people who did not send in a requested reply stating the school they desired to

visit. A newspaper employee took over the task of publicizing the event through the two large daily papers and the several community newspapers.

First Meeting Sketches "Day"

At this first general meeting, the decision was made to shorten the day to three hours, from 10 a.m. to 1 p.m., with an invitation to stay longer if the invitees desired. Visitors were to go directly to the school of their choice rather than attending a general meeting at a central location, as had been done in previous years.

From this first meeting, a time schedule was evolved leading to Operation E-B Day, April 20. On March 24, a letter of explanation was sent to all school principals from the office of the assistant superintendent.



Visitors (one school had 85) were free to view any class in action.

ent in charge of the project. In the letter, principals were given a general resumé of plans for E-B Day and were asked to extend an invitation to the businessmen in the school area. On March 29, a second letter was sent to the principals. Included was a list of teachers from the school who were asked to write to the business or industry which they had visited the previous year. The name of the business and the name of the person to whom the letter was to be addressed were also included. These facts were obtained from the Chamber of Commerce records of the 1959 Business-Education Day. On Monday, March 28, 5000 promotion sheets were sent to the Chamber of Commerce from the school printing department along with a suggested letter for the Chamber president's invitation. The promotion sheet, as finally developed, was headlined with the words, "Your Portland Public Schools and the Chamber of Commerce invite you to visit your Natural Resource Bank." The day, date, time, and place were included with a short statement of activities to be seen. The four pictures on this sheet were of an 8th grade algebra class, a high school science class, a foreign language laboratory, and a picture from the School for the Deaf. The 8½ by 12 inch promotion piece also had an addressed tear sheet at the bottom with the schools to be visited on the back of the tear sheet. All the businessman was asked to do was to encircle the name of the school he wished to visit, with his name, the name of the firm, and his telephone number, affix a 4 cent stamp, and drop the card in the mail. The Chamber of Commerce mailed the 5000 invitations and promotion sheets between April 1 and 6.

Stories to all publicity media were started on April 7 with the two daily newspapers and the weekly community papers printing stories on that date. In addition, news stories were given to the eleven high school newspapers. Additional news coverage was printed by the local papers on April 15; a picture of the Portland school superintendent holding an invitation on April 17; an editorial on April 18; and a final newspaper article on April 19. Radio spots inviting businessmen were started on April 11. Radio news departments also reported the story at various times. On Wednesday, April 13, the lists of businessmen who had returned their invitations designating the school they desired to visit were tabulated and sent to the individual schools. A list of the businesses represented at that time was given to

the Chamber of Commerce. The Chamber telephone committee then went to work calling those firms who had as yet not responded.

Individual School Effort, Also

During these first two weeks in April, the individual schools were busy formulating their own plans for getting the local businessmen to visit. The ideas were many and varied. Some principals asked each teacher to be responsible for seeing that one or two people visited the school. Others mailed personal invitations, still others telephoned the businessmen in their area or, with their teachers, called upon them personally after school. One high school principal held a meeting with all elementary school principals in his area. As a result, some 250 business establishments were listed as sending representatives. These were divided equally among the schools.

Finally, names of businessmen who received the Chamber of Commerce invitations and were late in sending in their replies were telephoned to the schools.

On E-B Day, April 20, each school worked out its own method of presenting the school's program to the visitors. Generally, visitors were to see the regular on-going program. In almost all schools a short meeting was held at 10 a.m., with visits to classes following immediately. In some schools with large groups, a tour was arranged; visitors were free to drop out and sit in on any class activities. Luncheons varied for the businessmen. Several elementary schools served the regular menu for that day — barbecued beef on a bun, green peas, sunset salad, and apple pie. Many of the high schools served a special luncheon.

Publicity continued through E-B Day. All three local television stations used pictures and stories of the event. The two daily newspapers and the community weeklies carried stories. Stories were telephoned to the radio stations and read on hourly newscasts.

E-B Day Success

E-B Day, 1960, was outstanding. The largest number of visitors appeared at one of the high schools — eighty-five businessmen and women in all. Other high schools reported as many as sixty visitors. Two years previously the highest in any high school had been sixteen. Elementary schools also had their share of visitors. One school reported fifty-two; another forty-four. All schools did not have visitors: fourteen reported none.

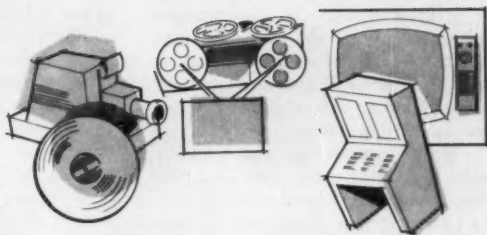
Was it worth it? School principals gave almost unanimous endorsement. As one principal said, "It was by far the best public relations move ever made by the Portland Public Schools. In my school, in previous years we had one or two visitors. This year we had fifteen. The success of the day was dependent upon effort by the local school principal and greater effort by the Portland Chamber of Commerce." Comments by businessmen and women were also of value. One stated: "This is the first time that I have personally been in a school situation in recent years. I was completely unaware of the conditions under which the schools operate and of the excellent work you do." Another representative of a large industry: "My firm pays out better than one million dollars a year in taxes. You people give our children something needed desperately — that is love. I think our tax dollar is well spent." Still another: "I saw things that made me believe the schools are doing superior work. I note also that the 3 R's are being taught." Finally, from a banker: "You and your staff are doing a wonderful job — may we, the citizens, back you up with the necessary tools to continue your good work for our children."

It was definitely worth it. First of all, the occasion gave people from business and industry an opportunity to visit their schools; second, it created a definite climate of good will toward the schools; and finally, E-B Day corrected many misunderstandings in developing a better knowledge of the work being done by the Portland Public Schools.

It must be pointed out that if schools are to develop a good understanding of education in the community, it is important that the businessman understands what goes on in the school. Having businessmen visit the schools makes it possible for them to gain an insight into what the school is trying to do and to see what schools have done to keep pace with modern technology.

Many of the new methods and materials which are used in schools today are unknown to the businessman, as he has not kept in contact with what has been happening in the schools. It is also important that teachers visit industries in order to gain a better insight into the economics and business life of the community. This two-way visitation is an important link between business and schools. Portland Public School officials feel that the continuation of Business-Education Day is a "must," and they are bending every effort to improve it. ■

Technology Is Revolutionizing Educational Administration



HERBERT B. MULFORD
Wilmette, Ill.

Technological change is knocking at the door of American educational administration. Sometimes the summons is philosophical and historical. Sometimes it is accompanied by startling innovations. Sometimes it is sharply critical of traditionalisms. Over-all there seems to be developing what might be called "educational technology." A top question among the rank and file of professional teachers and even of school board members is whether America is witnessing a slow or a rapid revolution in the teaching-learning process to match the technological changes wrought in science, medicine, industry, commerce, finance, agriculture and even automated housekeeping.

Why is education behind the other arts and sciences? A partial answer comes from James D. Finn, president of the department of Audio-Visual Instruction writing in the *Phi Delta Kappan*:

"Education has been, for a century or more, one of the areas of American

society which has walled itself off from technological advances, and consequently has created a technical vacuum. This vacuum is rapidly being filled. . . . In this time span (1900 to 1950) when high-speed printing techniques, radio, sound-motion pictures, television, and other pieces of communication technique were invented, developed and exploited, American education failed to apply these devices in quantity to the instructional process and, of course, failed to develop the appropriate technological systems necessary for this application."

A press release from John E. Ivey, Jr., president of Midwest Council on Airborne Television Instruction and of Learning Resources Institute, is reiterated in the Council's official documents concerning activities to implement "The Flying Classroom": "Only a fundamental breakthrough in education, as sweeping as past breakthroughs in science, industry and agriculture, can provide the boost in educational quality

that is needed, all across the curriculum and all across the country at a cost that can be met."

Maurice Mitchell, president of Encyclopaedia Britannica Films, Inc., of Wilmette, Ill., announces in a full press release (June 10, 1960) an all-out program to popularize for schools "programmed" lessons for pupil automatic self-instruction by means of "teaching machines": Classes of 100 to 150 students, supervised by a competent teacher while they move through the process of self-instruction, are believed to be entirely feasible and represent a major breakthrough in the field of teacher shortages and swelling instruction costs."

Camera Man in the Moon

The central themes of this whole transition have to do with saving money, relieving teachers of "school housekeeping chores," and improving the quality of American education. Since so-called educational television thus far has made



Does successful student use of technological instructional devices, such as television, have implications for administration?

the greatest strides in implementing "breakthroughs" in this electronic age, a sketch of a few of its most important events is in order. These areas call for specific study by school board and administrator committees:

1. Most dramatic are the scientific results in probing outer space and telecasting from experimental orbiting satellites photographs of Earth and the hidden side of the moon. Little or nothing of these exploits reaches the schools in respect to administrative changes.

2. On the other hand, far-reaching are the effects now to be observed in the educational efforts from television stations scattered across the land. On the score of the great number of viewers alone, the record of 70,000,000 potential and 20,000,000 actual viewers of formal systematic lessons over some fifty non-commercial ETV stations in as many communities across the nation testifies to the influence also of such other multi-million attendance records as those of the two great national political conventions during the past summer.

It is not unlikely that the noncommercial stations have nudged the national advertising networks to help schools and colleges in great measure. One must record the co-operation of numerous big business corporations and networks, such, for instance, as have provided the great programs in chemistry and physics by way of the National Broadcasting Company's "Continental Classroom." Those programs provided academic credits through numerous colleges and universities in more than a score of states. At this writing a course in mathematics was scheduled to begin September 26. In many areas stations have co-operated with school boards in putting on the air for school use programs specially and locally prepared for in-school viewing.

Obviously noncommercial ETV stations have contributed greatly to technological change through their own locally prepared lesson programs; but a great factor also has been the exchange of copies with other stations through the National Education Television and Radio Center, formerly of Ann Arbor, Mich., but now of New York City. The NET serves the local ETV stations much as the big wire services supply newspapers with news. The commercial stations of the big networks also frequently co-operate with the NET by creating and distributing educational programs.

Over wide stretches of the country there are movements to connect all ETV stations within a state so as to link educational institutions. This is particularly to be seen in Alabama, Florida, Georgia, Maryland, North Carolina, and Texas. Probably an influence there has been the operation of the Southern Re-

gional Education Board, serving sixteen southern states. Its purpose is to provide facilities through contracts across state lines between universities for "have not" states from the "have" states, so that students from the former may have educational services as if they were citizens of the latter. Television has been close to the interests of the board's directors. In the six New England states and in the 13 states from Colorado westward there are similar regional boards, which probably also have a technological influence of education.

Regional Plans

There have been plans in the South to connect television stations among all the states. Recently an elaborate Upper Midwest Six-State Educational Television Network survey was made of the educational situation in respect to Iowa, Nebraska, North and South Dakota, Minnesota, and Wisconsin, looking to the formation of a network in aid of all educational institutions in those states. Word comes from the Pennsylvania Department of Public Instruction that there are plans in the making to link the ETV stations of that state and to enable that chain to hook into an interstate network of New England which would give schools a chance to get French lessons from Montreal, engineering from MIT and literature from Yale. The New England project has been given initial financial aid from the Fund for the Advancement of Education, which has distributed Ford money for educational television over much of the nation.

Somewhat in contrast to this type of activity, a television committee of the North Central Association of Colleges and Secondary Schools, in contract with the U. S. Office of Education, has published a basic study on in-school television following a conference in Chicago last December of more than a score of specialists. This "Report of the Seminar on the Uses of Television in Education" should be "must" reading for anyone interested in the course of educational television, for it holds that television for the schools is here to stay and is rapidly expanding to change many traditional ideas on the teaching-learning process.

To the foregoing record must be added that of the movement which, through "closed circuit" television, is now snowballing across the country. The great audiences for either commercial or noncommercial stations are to be reached through open circuits. These programs may be picked off the air by schools or individual students as is the outstanding "TV College" of the Chicago board of education for college credits. There are patterns similar to this in many areas of the nation. The closed circuit is utilized

when lessons are not put on the air but, originating in a school studio or classroom, are confined to a building or several buildings of an institution. Some 500,000 pupils are now being formally educated in many subjects through television and presumably much is done under closed circuits. This is likewise true with many schools and training camps of our armed forces. In some teachers colleges and universities, teachers are trained by observing methods used in instructing pupils of their related laboratory schools. Two outstanding examples of the use of closed circuits are Hagerstown and all other school districts of Washington County, Maryland, and the Evanston Township (Illinois) High School. Last summer a large gathering of specialists in closed circuit television held in the latter city witnessed demonstrations on a "teaching machine," to which reference will be made later.

These movements have been gathering headway only during the past few years. In 1952 the Federal Communications Commission allocated 258 air channels and reserved them for strictly educational purposes. About fifty ETV stations are now on the air, according to the Joint Council's ETV Factsheet, and nearly a score additional are being planned or constructed. Congress has been stimulated to hold hearings, particularly in the South and Far West, in an endeavor to ascertain whether financial aid should be given by the federal government to augment ETV coverage of every state through meeting capital costs of construction.

Many tests have been applied to determine the efficacy of television in instruction. Two small reports on these congressional hearings have been printed by the United States printing office. For the greater number of experiences they indicate uses to improve the quality of education. But testimony from officials of the schools of Dade County (Miami), Florida, was printed to the effect that by staggering time schedules in one high school and by using television for very large classes, the system was able to avoid building another high school to meet the exploding population of pupils and thereby had already saved the community \$3 million. They estimated a saving of \$12 million by similar administrative changes within five years.

"The Big Lift"

In all the foregoing situations wherever conditions called for linking schools, universities or television stations, plans envisioned distant connections either by telephone coaxial cables or by microwaves, which are waves of a much smaller dimension than those carrying television or radio messages.

Because, perhaps, many experts in television were saying that the electronic age had caught up with education and that the school people were "dragging their feet," suddenly out of the blue in October, 1959, the Midwest Council on Airborne Instruction announced the plan to make an effort to telecast lessons in many subject fields to parts of Indiana, Illinois, Ohio, Kentucky, Michigan, and Wisconsin. In the area to be covered there are an estimated 13,000 public school districts, not to mention parochial and other private schools. Pupils are estimated at 5,000,000. Two airplanes are now being equipped with transmitting stations, and the FCC has allotted air channels for telecasting the lessons from a height of 23,000 feet in order to cover the planned zones. Some 300 teachers have been screened to select a limited number with some preliminary training in the intricacies of producing lessons on video tapes. This work has been done in part at Purdue University and in part at television stations. Salaries of the teachers, who will be on leave from their regular school positions for about a year, will run from \$9,000 to \$17,000.

In preparation for the reception of these airborne television lessons in ground level classrooms, about 2000 teachers attended university workshops in the summer of 1960 in 19 areas where resource centers had been designated for the striking "Flying Classroom" experiment. Experimental airplane runs are planned for next spring, one of which is a stand-by for the teaching plans in case of unforeseen lesson failures in transmission. Real teaching begins in September, 1961.

Not least of the influences of "MPATI," as the project is called, is the vast implication of technological change from this shock to old traditions of school management. School people in the six states are kept on the *qui vive* by the publication of important documents. Three should be named here. One issued by a new Ford-financed Educational Facilities Laboratories, is "Design for ETV," is a brilliantly illuminated book showing new styles of classrooms with moveable partitions, television installations and pupil seatings for the TV age. Another is "Midwest Program on Airborne Television Instruction" issued by the Council. This carries charts of TV reception zones for the airborne lessons, data on installations and their costs. A small "MPATI News" sheet is being sent quarterly to school people in the six states.

A new organization closely related to "MPATI the Flying Classroom" is Learning Resources Institute, with a center at Princeton, N. J. One of the somewhat spectacular aims of this group, which is also related to "Con-

tinental Classroom," is to translate effective airborne lessons into foreign languages and, by supplying them to the underdeveloped nations of the world, provide a "breakthrough" of the barriers of ignorance.

ETV Boom

Apart from detailed descriptions of the principal movements in educational television, there is a wide range of miscellany which should be co-ordinated, evaluated, and presented to school authorities. Space here permits only a few high points. In rural areas television has provided science and mathematics where previously they were not taught. Dropouts and noncollege aspirants have obtained two-year college credits. Stenographers in hospitals are on their way to becoming physicians, after studying by ETV and in the subway with textbooks. The whole range of discussions on art, architecture, archaeology, business, music from jazz to great symphonies, half a dozen languages, science and the humanities, with or without college credits, may be had for the taking. Guide books for televised studies and related textbooks, of course, are imperative, but when visiting government commissions from Japan, Venezuela, Guam, Guatemala and other countries make long journeys specifically to view experiments, something is happening in education by technology.

There are pitfalls; e.g., expensive installations even under engineering guidance have had to be discarded because of bad planning. Architects are only slowly getting up to date. And there is some dispute over whether airborne lessons could become regimented and whether ground-level microwave networks are not better in the long run. These questions are recommended for answers by the enthusiasts who hold that television is the greatest force for the communication of ideas, including the field of education, since the invention of movable type.

But the foregoing comprise only a

— Wall Street Journal



"What's all this? I thought we had computer machines?"

part of the great technological challenge. There are the various types of "teaching machines" now in incubation and experimentation to be considered. This new departure from tradition has not had the benefit of enough experiment and publicity to be granted the audience it may deserve. First discussed by Sidney L. Pressy in the 1920's and advanced in the last decade by B. F. Skinner of Harvard University, its process has two main phases, according to the latter in his "Teaching Machines" (*Science*, October 24, 1958): lessons are programmed so as to lead the pupils "step by easy step" through a subject as they scan the sequence verbally or visually through a box-like contrivance with which they are both self-instructed and graded automatically. There are several types of these devices, conceived psychologically from different points of view. Some are so simple that their cost seems negligible. Others run into high prices. One of the more elaborate patterns, as noted in the Systems Development Corporation's "SDC" (March, 1960), is so contrived that if lessons record repeated failures by the pupil, the sequence is "branched" automatically to a less difficult sequence; if too easy, the gifted pupil's task is branched to a tougher series. Widely used laboratories for teaching foreign languages are a special type of teaching machine.

The key to this real type of automation in education is the preparation of the "programmed lessons" by professional specialists. Popularizing these experiments beyond the current stage calls for adoption of one system out of the many by some organization strong enough and well enough known to gain wide attention among conservative school administrators and their boards of education. Last June 10, Encyclopaedia Britannica Films, Inc., announced such a program for this purpose. It had experimented at Roanoke, Va., by programming ninth grade algebra to eighth grade pupils and in covering successfully a year's work in half time. Hollins College of that city is undertaking the co-operative work for the next year. Meanwhile the Educational Film Company is having five mathematics teams experiment on their own in five separate cities. The promise is proffered that here technology will produce great savings in both teachers' time and money.

There is no clearing-house in the United States where the challenge of exploding pupil population and mounting school costs is measured against possible technological gains. The people need immediate authentic information that will allay the professional fears of occupational unemployment that presently bog down constructive plans to serve all the children of all the schools of the land. ■



Air view of
Rancho Alamitos
High School,
the prototype.

Garden Grove, a young community thirty miles from Los Angeles, is growing at a phenomenal rate. Seven years ago, there were only seven hundred students in the High School District; today the enrollment exceeds six thousand. Like other Southern California districts faced with similar problems of exploding populations, Garden Grove has had to resort, in the past, to makeshift temporary facilities and double sessions.

In 1958, the governing board took the emergency step of authorizing re-use of existing plans for construction of the district's new Bolsa-Grande High School.

The new plant actually was started in December, 1958 and occupied in September, 1959; Notice of Completion was filed in December, 1959—a full year ahead of the time normally required for a design and construction of such a comprehensive project.

The contract bid of \$2,192,955, equivalent to a per pupil cost of \$1,096, is a very reasonable figure for such a comprehensive brick and concrete high school plant. In addition to the basic economy of the original design, the district realized further savings through reduced architect's fees resulting from re-use of plans.

Bolsa-Grande and its prototype, Rancho Alamitos High School, both accommodate 2000 students in providing complete facilities including administration, library, homemaking, science, industrial arts, cafeteria, snack bar, separate gymnasiums for boys and girls, locker spaces, music building, multi-pur-

pose unit, outdoor athletic areas, covered walks, outdoor study areas and 35 standard classrooms.

Same Architect, Engineer, Contractor

The architectural firm of James H. Van Dyke and Associates, designer of the original plant, adapted existing plans for use in construction of Bolsa-Grande High School. S. B. Barnes was structural engineer for both jobs.

It may be significant that this successful re-use not only employed the services of the originating architect and engineer, but also the contractor most familiar with the prototype school.

Rancho Alamitos was built in six phases over a four-year period. During its final phase, construction was started on Bolsa-Grande, which was completed in its entirety within twelve months. The general contractor for both concurrent projects was Noyes Roach—C. L. Peck, in joint venture.

re-use of existing ECONOMY PLUS

DONALD L.

Superintendent, Garden Grove,

According to official reports of the Allocation Board, state Department of Finance, these two Garden Grove plants were the most economical of all high schools bid in California under the State Aid Program for the applicable period (November–April, 1958–59).

The final construction increment at Rancho Alamitos—including girls' gymnasium, industrial arts, social studies, language arts, multi-purpose, and music facilities, plus administration remodeling—cost \$11.98 per square foot. The complete Bolsa-Grande plant cost \$12.24 per square foot for buildings.

Both schools feature identical cost-saving techniques such as back-to-back classrooms, tilt-up concrete walls and precast concrete frames repeated as standard elements. However, despite basic similarities, great care was taken to achieve individuality for each.

At the time re-use of plans was authorized, it was generally recognized

Bolsa-Grande
High School,
the resultant
"copy."



high school plans: INDIVIDUALITY

KENNEDY

Calif., Union High School District

that even the urgent need for classrooms could not justify construction of a "carbon copy" school.

As Architect Van Dyke pointed out: "Irresponsible re-use of plans could cause school design to become monotonously standardized and stagnated. Student and teacher morale would suffer. Within a few years, we might find ourselves blindly following the path of false economy by building schools that were already obsolete!"

A Personality of Its Own

In accepting the assignment to adapt the Rancho Alamitos drawings to the new school, the architect felt that it was practical, in this case, to devise certain changes that would provide Bolsa-Grande with the latest functional improvements and also give the new plant a personality of its own.

One factor which obviously influenced the decision for re-use was the contem-

porary character of the prototype Rancho Alamitos High School. With five of its six increments already in service, Rancho Alamitos had proved efficient and economical in all respects and presented a modern appearance which would not be quickly dated.

Functionally, drawings were revised where the new school could capitalize on recent knowledge and equipment available since the original school was designed. A new overhead lighting method at Bolsa-Grande, for instance, permitted the architect to greatly reduce vertical window area, thus minimizing sky glare and eliminating the problem of class diversion because of walkway traffic.

As used at Rancho Alamitos High School, original plans for heating placed ducts along the front of the classroom at baseboard areas near the floor. At Bolsa, both back-to-back classrooms are served by placing hot-water pipes overhead, at the inner wall, with unit venti-

lators opening to each room. (Architect Van Dyke indicates that this system can be economically designed to include classroom air conditioning as well as heating.)

Another Bolsa-Grande innovation is the use of acoustical tile panels, extending downward from ceilings at the rear walls, concealing pipes and conduits and improving acoustical values.

Such design changes were incorporated wherever possible in the new school and also for the final increment of the Rancho Alamitos plant.

Further economies were realized during construction. Plans and methods had already been proved—and the contractor had already gained experience for the job itself. At Bolsa, Roach-Peck saved time and cut costs by precasting standard concrete frames and wall sections on the site.

Problem: Individuality

Obviously, new schools can be built cheaper and faster by re-use of existing plans; the catch is: how to keep abreast of the latest concepts in design, and how to give the new school an individuality—a character of its own so that it will not be confused with its prototype.

As must be expected, there are many similarities between the two high schools. There are also, however, many interesting points of distinction: each school is, indeed, an entity.

Viewed from the air, the two schools are not likely to be confused. Rancho Alamitos is designed essentially around

James H. Van Dyke and Associates designed both schools.

	RANCHO	BOLSA
Doors	U. S. Plywood	Overly
Classroom floors	Mastic Tile Corp. of America	same
Heating and ventilating	Herman Nelson	American Blower
Boilers	Rite Hot Water
Temperature control	Barber Colman	same
Lighting	Sunbeam; Globe	Sunbeam
Program clocks	IBM Electronics	Simplex
Intercom phones and broadcasting system	Dukane	Stromberg Carlson
Panel boards and electrical control	Zinsco	same
Urinals, wash bowls, toilets	Crane; American Standard	Crane
Toilet partitions	Sanymetal	same
Lockers	Worley	same
Gym equipment	Madart	Madart; Jamison
Bleachers	Universal	Brunswick
Tablet arm chairs	Virco	State Industries



Rancho classroom. The baseboard duct heating system, overhead lighting and window area, as shown here, were revised in adapting the original plans for the new school.



Bolsa classroom. Wood panelled partition (rear of photo) is non-bearing and easily removable if expansion is required.

a central square; Bolsa-Grande embodies parallel "finger" classrooms of varying lengths. Sixteen foot modular design, along with standard, precast components, permitted length variations to be accomplished economically. Site plans are quite different, notably in the locations of gymnasiums, athletic fields, parking, and bus loading areas.

But more important than this bird's-eye distinction is the individuality of each school when seen from the ground-level viewpoint of students and teachers. For example, a unique bus-loading shelter provides Bolsa-Grande's first impression to visitors and immediately sets the new school apart from its prototype. Consisting of precast concrete frames cantilevered beneath gracefully curved steel roof-deck, this dramatic structure is compatible with the basic design and yet quite dissimilar from any element existing at the Rancho Alamitos plant.

Throughout the new school, the architect carefully developed unusual and distinctive treatments for entrances, landscaping, and separation of outdoor areas. Thus, where brick walls serve as dividers at Rancho, Bolsa uses redwood fencing.

Each plant has its own color scheme, both exterior and interior; the new school is primarily beige, while Rancho Alamitos is pale green.

Safeguards

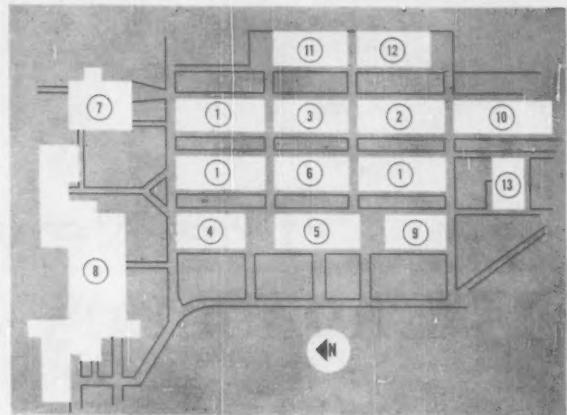
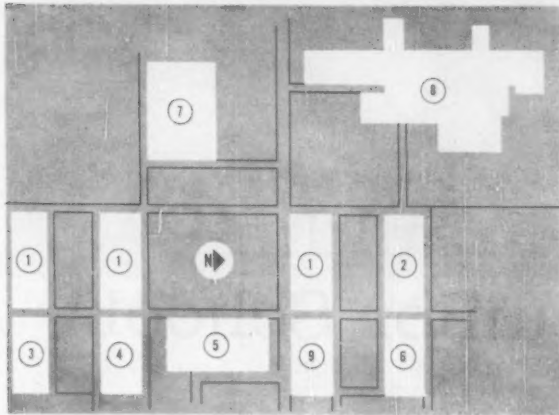
In summary, let it be suggested that re-use of existing plans be considered only when the exigencies of the situation make this a desirable solution. If re-use is necessary, three safeguards are urged:

1. *The prototype school should be modern.* Rancho Alamitos was unusually contemporary in concept; its plans had been kept up to date during five construction phases and its final increment was conveniently scheduled to be built simultaneously with construction of the new school.

Bottom: pictured are walkways at Rancho (left) and Bolsa. In the "offspring" structure, windows were reduced in height.



The double floor plan (Rancho left, Bolsa right) shows how various units were re-used with originality.



Similar units are numbered accordingly: 1) classrooms, 2) science classroom, 3) art classroom, 4) library, 5) administration, 6) home-making classroom, 7) dining room and kitchen, 8) girls' and boys' gymnasiums, 9) business education classroom, 10) language classroom, 11) auto shop and machine shop, 12) wood shop — gun metal shop, and 13) music classroom.

2. Practical improvements should be incorporated into the new school. Thus, Bolsa-Grande benefited by the better lighting and heating systems which became available since the architect produced his original Rancho Alamitos drawings.

3. Each school must have its own character. Individuality was created for Bolsa-Grande High School through fresh architectural approaches to site planning, size and location of buildings, entrance treatments, landscaping, color treatments, and various other details.

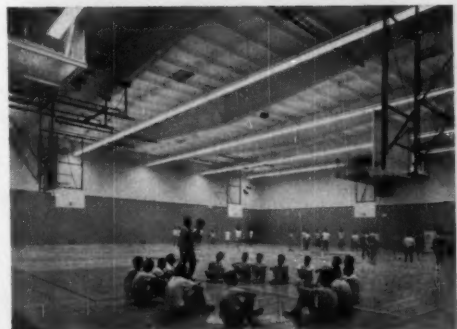
Re-use was successful at Garden Grove. The danger of producing a "rubber stamp" school was avoided. Nearly 2000 new students enjoyed complete, first-class facilities when they enrolled at their new school for the fall term. The emergency was met.

Equally important, precious time was saved so that the design, financing and construction of Garden Grove's next — urgently needed — high school could proceed in the conventional fashion. ■

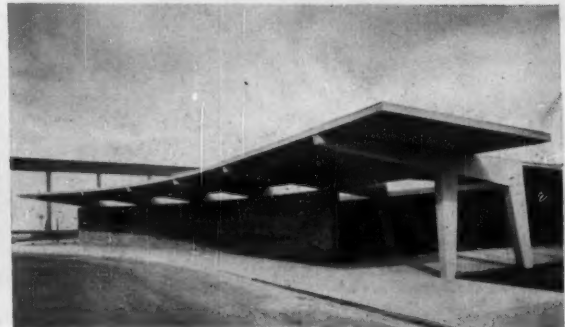
The library at Bolsa-Grande. Main entrance is at left, with access to outdoor study area (right) enclosed by redwood fencing.



Interior of boys' gym, Bolsa-Grande. Extending halfway down the wall is a protective metal acoustical pan — an improvement over the Rancho gym.



Below, left: both schools boast sliding glass doors between the arts and crafts room and the outdoor work area. Below, right: the distinctive bus-loading shelter at Bolsa-Grande.



The New Franklin Elementary-Junior School

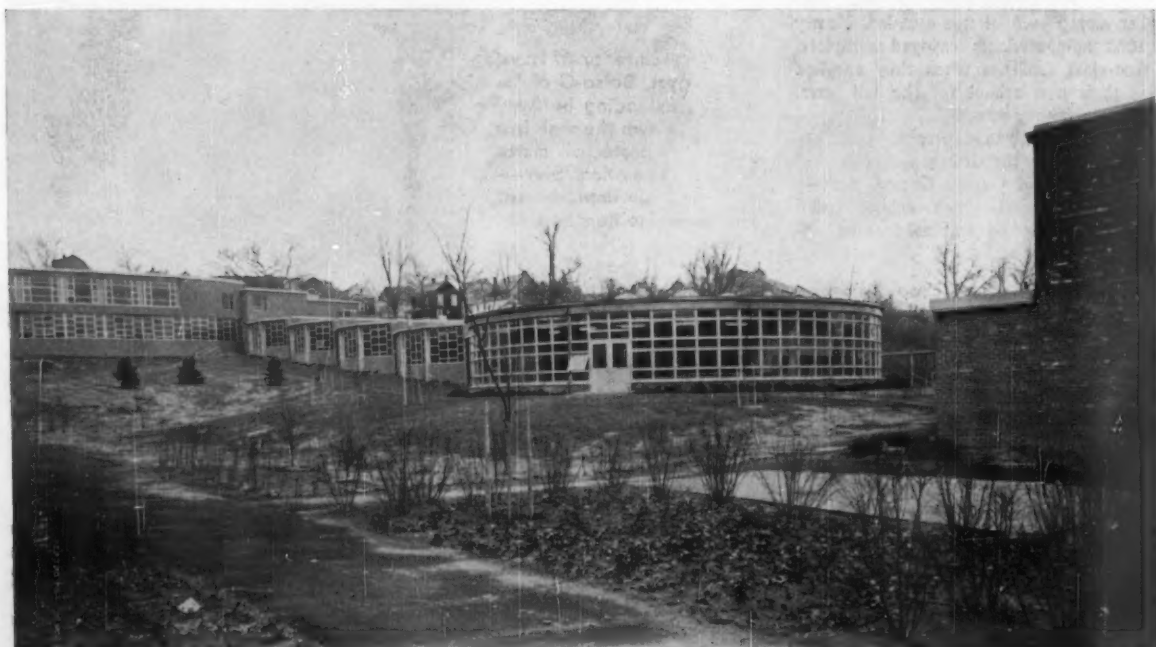
EDMUND L. TINK and NEALE R. HAMILTON

Design for an inward look
turned an undesirable
site to advantage

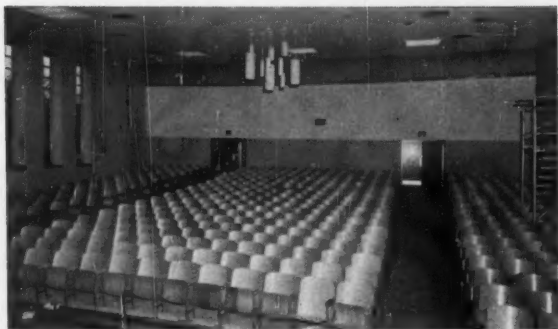
An industrial community of 40,000 in
metropolitan New Jersey, Kearney

Dr. Tink is superintendent of schools,
Kearny, N. J., and **Mr. Hamilton** is
the principal of the new school.

needed a replacement for two obsolete
schools that would accommodate 1000
elementary and junior high students.
The only available site (seven acres)
was one already owned by the school
board, but which presented two prob-



Architect for the Kearney school was Fava and Saunders of Newark, N. J.



Above: a thespian's view of the auditorium.



Upper right: view of corridor showing colored tiling, lighting, and no lockers. Student wardrobes are in classrooms.

Lower right: a pie-shaped kindergarten room, with soundproof partition, movable furniture, and storage bins on casters for flexibility.



lems: poor environment, in that the neighborhood was in an older part of town and the adjoining land was comprised of the back yards that were all somewhat unattractive; and landscape, inasmuch as the upper half of the site was a hillside that sloped 45 feet.

The finished product (\$3 million) resulted chiefly from resourcefulness in overcoming the site problems, which were actually turned to advantage by the architects, Fava and Saunders of Newark, New Jersey. Constructed on the slope and following a "campus" plan, the building has a ground level entrance for every wing—a very fine safety feature and one highly desirable for physically handicapped children. Ground level entrances are provided for the kindergarten and special education classrooms, also.

There are three other special safety features. A fire alarm box in the principal's office is connected directly with fire headquarters, an automatic detector protects the building from possible boiler room fires, and an emergency generator will supply power for corridor and stairway lighting in case of a public service power failure.

Overcoming the environment led to a school design having an *inward look* by means of a landscaped interior quadrangle. This has resulted in a beautiful school, functional, durable, and safe, with a maximum of natural lighting and separate academic wings for primary, intermediate, and upper grades. The audi-

Academic Classrooms Four per grade from first to eighth, three kindergarten with folding sound-proof partitions between rooms, and two special rooms for handicapped pupils.

Special Rooms Art, music with choral and practice rooms, home economics, general shop, activities room, play courts, maintenance shop for school system, assembly areas for protection and congregation of pupils before school openings, and conference areas for parents and teachers.

Rooms for School-Community Use Library, small group-assembly room, auditorium (514 seats), gymnasium, and health suite with Baby-Keep-Well Station.

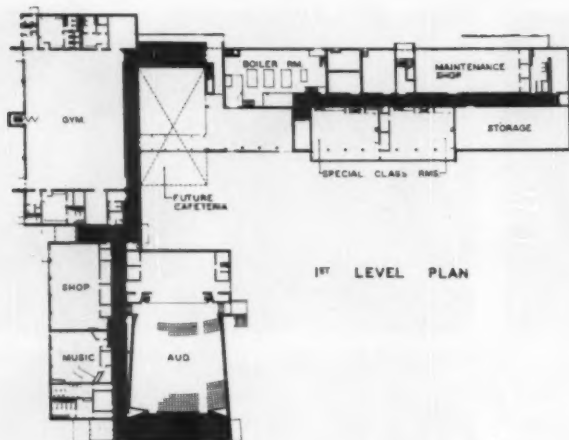
Construction Features

Architectural Except for long span areas, the school is of reinforced concrete. Slabs are uniformly 12 in. thick, hollow core tubes, and without beam drops. Acoustical tile is applied to slabs with no furring or suspension system needed. Partitions are truss steel studs. Uniformity of ceiling heights, with no beams, simplifies this system and also provides pipe and conduit chases in the partitions. Long span areas are spanned by steel joists. Decking is concrete plank. Ceramic tile is used on corridor walls, toilet room walls, and toilet floors. Corridor and classroom floors are vinyl asbestos tile. Floors of the auditorium lobby and main entrance are terrazzo. Gymnasium floor is wood on cork; walls are structural glazed tile. The wall facing the athletic field is of tempered plate glass. Pupils' seats and desks are modern movable furniture of various bright colors. Built-in furniture is pre-fabricated. Certain units are on casters to permit flexibility of arrangement. Steel chalkboards and cork tackboards are used on all available classroom walls. Pupil wardrobes are built in each classroom, and there are no lockers in the corridors.

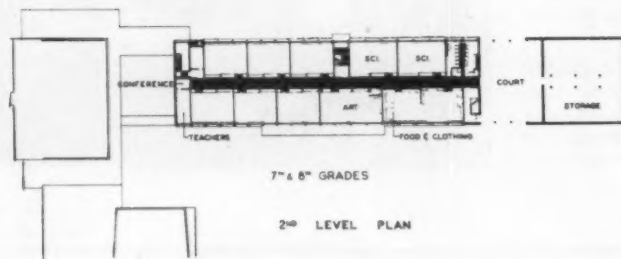
Plumbing Classroom toilets are provided for primary grades, central toilet rooms for upper grades. Unit kitchens are provided for kindergartens, teachers' and clerical help's rooms, and the group-assembly room.

Heating Heating system is steam with unit ventilators. Control system is dual pneumatic. Individual rooms can be heated singly at night.

Electrical Lighting in general is fluorescent. Intercommunication system runs throughout plant. Sound system to all rooms also carries programming signals. Outside speakers are provided. Music room has high-fidelity system. Gymnasium and athletic field are equipped with sound system for record playing and announcing.

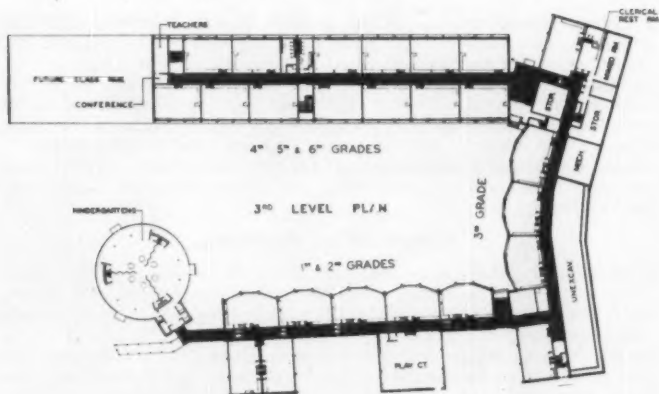


1ST LEVEL PLAN



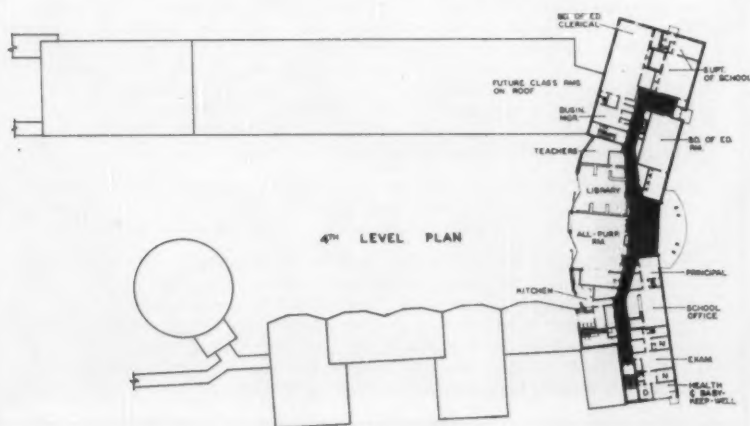
7th & 8th GRADES

2ND LEVEL PLAN



4th, 5th & 6th GRADES

3RD LEVEL PLAN



4TH LEVEL PLAN

torium and gymnasium, on the lower side of the campus, can be heated, ventilated, and lighted separately for independent use at night by the school or the community.

Classrooms Self-Contained

Projecting into the campus, the kindergarten is an unusual circular unit, connected to the rest of the school by an enclosed, covered walk. The walls are constructed with glare-proof glass. This feature of the new school is divided into three pie-shaped kindergarten rooms by sliding sound-proof partitions. These rooms are completely self-contained, and each has its own outside entrance from the campus.

All the primary classrooms, also, are self-contained, with toilets, sink, drinking fountain, and pupil wardrobes. In the first and second grade rooms, one wall is a large floor-to-ceiling bay window overlooking the landscaped quadrangle; this increases the beauty of these large, light, and airy classrooms for the little children.

Because of the perimeter environment, most of the classrooms look out over the attractive interior campus. The window sills, lower than is customary, take advantage of this orientation. In addition, every classroom has in its windows several vari-colored panes of translucent glass to add to the bright and cheerful atmosphere.

The gymnasium, auditorium, group-assembly room, library, and Baby-Keep-Well Station are arranged for either simultaneous or single use without mingling of people or passage through academic areas.

Because this is a neighborhood school and the town has two other junior schools (with 7th and 8th grades), neither of which have cafeterias, the board of education did not list, at this time, a cafeteria in the requirements for the new building. But structural provisions have been made for additional future classrooms on the roof of the south wing, and there is adequate space for a cafeteria, if desired in the future.

Taking advantage of the terrain, it is possible to have at least one exit at grade level for each floor level.

Separate toilet and powder room facilities are provided for auditorium and gymnasium use, and the athletic field has outside entrances to toilet facilities.

The contract cost of the new school (1,600,000 cubic feet, 115,000 square feet) was \$2.5 million. Additional expenditures for furniture, fixtures, architect's fees, landscaping, etc. will raise the total ante another half million. Construction, started in the summer of 1958, was completed and the school occupied in February, 1960.

Pre-Stressed Concrete Saves

KEN KIRKPATRICK

Tulsa, Okla.

Two northeastern Oklahoma rural school boards cut construction costs sharply and reduced their fire insurance rates substantially by building new schools designed around pre-stressed concrete slab roofs.

Sequoyah rural school district's new high school building near Claremore cost only \$6.45 per square foot, including all built-in equipment. Star elementary school, near Wagoner, cost only \$7.30 per square foot, including a kitchen and a septic system. The insurance rate for Sequoyah dropped from the \$1.27 per \$100 valuation charged for the previous building to only 36.4 cents for the new structure. A similar rate is expected to apply to the new Star School.

Tulsa architect Scott Workman held costs of the new buildings low by exploiting fully the characteristics of low-cost, pre-stressed concrete slabs, a relatively new construction material that is now nevertheless used widely throughout the world.

Pre-stressed concrete is made by placing high tensile steel wires or rods lengthwise in a concrete slab. The steel is stretched, and either anchored at both ends of the beam or bonded to the concrete. In trying to pull back to its original length, it greatly increases the strength of the concrete. The Oakley Engineering Company supplied the roof slabs.

Both school boards wanted buildings that were as nearly fireproof, but as inexpensive as possible. The new Sequoyah School replaced a building that had recently burned, shortly after it was enlarged considerably. Workmen met both requirements by following these principles:

1. Dimensions of rooms are based on multiples of the roof-slab dimensions.

2. Pre-stressed roof slabs were placed in position quickly by a crane, thus holding the labor costs low.

3. Relatively short roof spans were planned so that thin, low-cost roof slabs could be used.

4. Walls and partitions divide space and bear weight.

5. Lower walls were used than are possible with conventional built-up roofs. This reduced wall height and lowered costs further.

6. Walls were built of low-cost concrete blocks and hollow bricks.

Upkeep and Insurance Rates Low

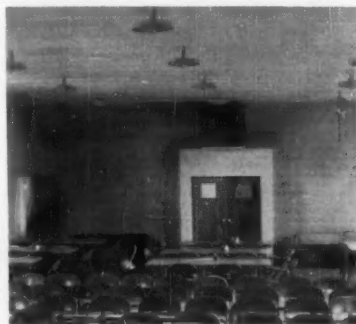
Sequoyah and Star school officials expect maintenance and operational expenses to be low. Supt. Travis Tice says that maintenance costs at Sequoyah for the next twenty years will be negligible. The low insurance rates earned by the new buildings are also important in keeping down operational costs. The new insurance rate will save

more than \$1,000 annually for insuring the building and the contents, which can be insured separately because a fire in a single room would burn itself out without penetrating to another room. This confirmed the board's opinion that the building is fireproof.

Floor space of the Sequoyah School is 17,500 sq. ft. This includes seven classrooms, offices, and a gymnasium with a 17 by 32 ft. stage. The building has built-in cabinets and bookshelves, metal lockers, forced-air perimeter heating, and asphalt-tile floors. Although the concrete roof slabs are exposed, acoustics are good.

Construction of the Star School is similar: pre-stressed roof slabs, hollow bricks, and lightweight concrete blocks. Floor space is 5200 sq. ft. The school has two classrooms, an office, an auditorium, and a kitchen. An unusual feature is that the kitchen opens into the auditorium, which may also be used as a lunchroom. This combination reduces floor space needs.

Exterior walls facing the wood are hollow brick; other exterior and all interior walls are of concrete blocks. The cost of \$7.30 per sq. ft. includes a kitchen, a septic system, built-in bookcases, lockers, and forced-air heating. ■



Star interiors above and left and Sequoia below. Photographs illustrate the simplicity and durability of pre-stressed concrete.





An architect's sketch of Hamlet Elementary School in Amarillo, Texas. Architects were Clayton Shiver and Russell Megert of Amarillo. Robert R. Ashworth is superintendent in the Amarillo Independent School District.

Hamlet Elementary School

BILL BAXTER

School-Community Relations
Amarillo, Tex., Public Schools

Architects Clayton Shiver and Russell Megert are likely to lead off any tour of Amarillo's new Hamlet Elementary School in Amarillo, Tex., with, "This building was designed and scaled for children." An average visitor may not be impressed with the comment; for

what else would the Amarillo School Board spend \$324,000? But once inside the building, it becomes obvious that the architects have done precisely what they said to an impressive degree. Hamlet's whole feeling is for children, graduating from the scaled-down, boldly

colorful environment of the first grade to a more sophisticated and work-a-day approach for sixth grade students.

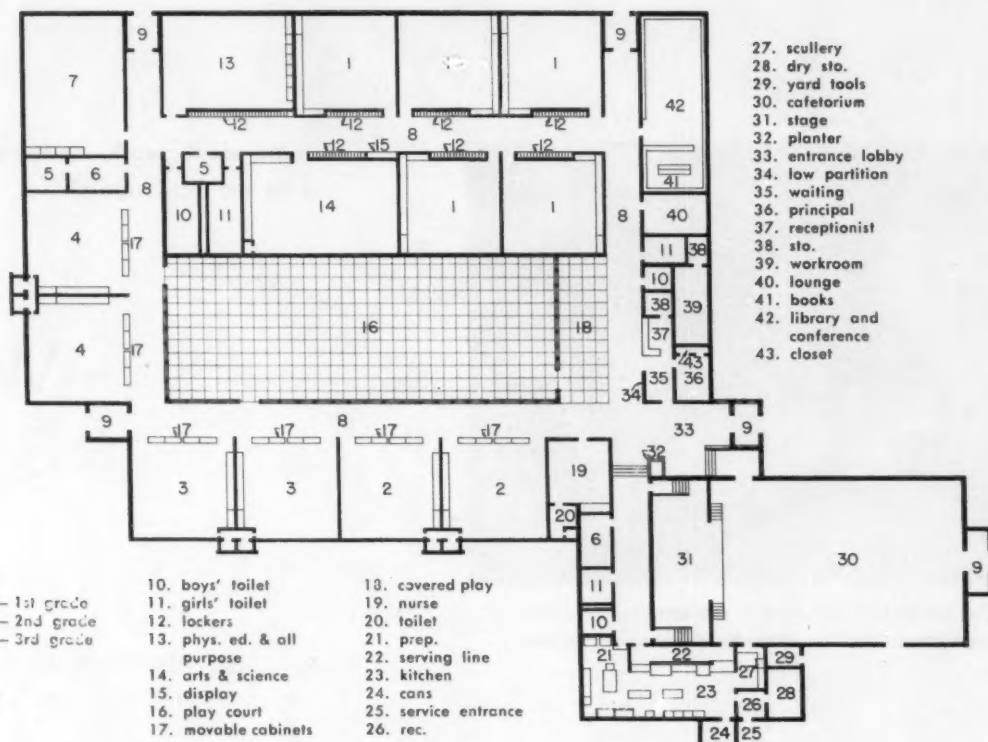
The site of Hamlet School is hilly terrain on the north side of Amarillo in a medium income bracket locale. The playground and related area around the school, planned in conjunction with the Amarillo City Park Department, will be used as a park during the summer and as a teaching aid during the school months. Since the school building site sloped 30 feet from south to north, a finger design, or other architectural plan which required large areas of plot, was not feasible. Therefore, a hill was levelled to provide a site for an interior court plan, which may become the pattern for other school buildings in the area.

The primary students of the Amarillo school system are taught in self-contained classes, while the intermediate students change classes at 40-minute intervals. Hamlet School design facilitates this arrangement.

Hamlet is Amarillo's first venture in portable classroom walls. The corridor walls of the six primary classrooms are actually the children's and teachers' wardrobes, which may be rearranged to extend each room across the corridor to the glass walls of the interior court. The court with its free form pool and plantings is a thing of beauty for the kids to look at and work in. At the



A view of the enclosed play area for physical education classes. The overhang at the right reduces fierce light glare common to the Texas panhandle area.



teachers' request, restrooms are located between each two primary grades.

The intermediate classrooms are designed with double-loaded corridors for easy classroom changing. Lockers are installed in the corridor walls. The intermediate area includes special rooms for music, arts and science, and physical education.

An earnest effort was made to eliminate glare in the classrooms by the use of a five-foot overhang on the exterior walls and placing windows at the soffit. A three-foot glass panel tops the partition walls between all classrooms, diffusing light and abetting the "open" feeling created by the court. Two skylights are used in each room, as well as



Storage cabinets form the interior walls for all primary rooms, as shown above. The corridor area in front of the cabinets may be combined with the classroom.

CONSTRUCTION MATERIAL: paint products, Pittsburgh Plate Glass Co.; windows, Lupton; classroom floors, Kentile; acoustical tile, Armstrong. **MECHANICAL EQUIPMENT:** heating and ventilating, Janitrol; temperature control, Minneapolis Honeywell. **ELECTRICAL EQUIPMENT:** lighting, Lighting Dynamics; program clocks and fire alarm systems, Standard; panel boards and electrical control, Square D. **SANITARY INSTALLATION:** toilets, urinals, and drinking fountains, Crane; toilet partitions, Henry Weis Mfg. Co.; flush valves, Sloan. **GENERAL EQUIPMENT:** lockers, Republic Steel. **ADMINISTRATION EQUIPMENT:** office furniture, American Desk; duplicating machines, A. B. Dick. **CLASS AND RECITATION ROOM:** pupil's desks and tablet arm chairs, Globe Mfg. and Seating Co.; teachers' desks, American Desk. **AUDITORIUM — STUDY HALL:** folding chairs, American Seating; motion picture machine, Bell & Howell. **CAFETERIA — LUNCH ROOMS — MULTIPURPOSE ROOMS:** chairs, American Seating; tables, Virco; dishwashing machines, Hobart; refrigeration, Koch.

eight slim-line fluorescent fixtures.

The Amarillo Independent School District was fortunate that the bids for this school were taken at a time when the local contractors were eager for work, thus allowing most competitive bids from the general contractors and subcontractors as well as material suppliers. This brought the plan down from the architect's estimate of \$11 a square foot to \$9.74 a square foot. ■



The pole-type school bus garage has a pleasing appearance that is acceptable in any community.

A hard day's work, and then —
out in the cold again?

Watch School

Tomorrow morning when dawn breaks across the Atlantic seaboard, the largest school bus fleet in the world will transport half a million tots in eight thousand "carriers" to schools throughout the state of North Carolina. By the time a glint starts to reflect from San Francisco's Golden Gate four hours later, over 150,000 buses will have begun their deliverance of ten and a half million children to their schoolhouse doors.

This service, which provides transportation for 31 per cent of America's public school pupils, is obviously a vast undertaking. It costs the taxpayers \$384 million a year. This accounts for an average of 4½ cents of each dollar in current school budgets. But aside from their operating expense, school buses represent a capital investment that is worth the serious attention of every school administrator. And one of his main concerns might well be, "What will we do with them when they're off the road?"

The answer, of course, varies from the small rural school districts with one or two buses, which the drivers occasionally take to their farm homes and park in their barns, to large districts transporting several thousands of youngsters daily. In the latter case the school usually operates a full-scale garage and servicing center under the supervision of a professional transportation administrator. These centers are completely equipped and staffed with facilities for full maintenance and overhaul of the school district's motorized equipment, with mechanics on duty who are capable of taking a bus apart, piece by piece, and reassembling it—and frequently

they need to do so.

Between these two extremes there lies a broad spectrum of operating practices. As a very rough rule of thumb, the recommended procedure seems to be: with less than ten buses a district should subcontract maintenance and repairs; ten or more justify the establishment of the district's own repair facilities and the employment of a qualified mechanic; twenty or more require the services of two mechanics and a helper.

Idle 85 Per Cent of the Time

Regardless of the number of buses operated by any given school district, it makes good economic sense to provide them with adequate shelter. The average running time for each bus is in the neighborhood of four and a half hours, five days a week. This means that for more than 85 per cent of the time, the average school bus is not in operation.

Exposure to the weather can easily account for 60 to 75 per cent of the cost of maintaining a school bus fleet. Unlike the private car, a school bus doesn't suffer the artificial obsolescence of style changes and fashion trends. With proper care and suitable protection from the weather when it is not in use, a school bus may be expected to give good service without major maintenance costs for upward of twelve years. If on the other hand it is left out of doors twenty-four hours a day, every day in the week, the sun and rain and heat and cold may very easily relegate it to the junk yard in four or five years. With the present day cost of new school transportation equipment, it is difficult to avoid the conclusion that

garages are an economic necessity.

School bus garages represent an important investment in real estate and facilities. The buildings themselves needn't be elaborate. In fact, it is the contention of some public officials—and many taxpayers—that today's trend in school architecture has carried the school bus garage along with it, to the point where the utilitarian aspects have been neglected at the expense of the aesthetic. There is little factual evidence to support this contention, but there is enough to make many school board officials want to take a long, hard look at their plants and their long-range planning.

Basically, the primary requirements of the school bus garage are threefold. First there is the matter of original cost. The other two are flexibility for future expansion and long-range maintenance costs.

A fairly new development in school garage construction has attracted the attention of school officials and architects. This development is pole-type construction. It is a well-established building technique in the industrial and commercial fields, but until recently it has not been widely used in the educational.

Poles Attract Opposites: Economy and Quality

On all three counts, pole-type construction admirably fits the requirements for school bus garages. Initial costs are decidedly lower than any other type of construction which can produce a sound, serviceable building. The school board of Battle Creek, Michigan, erected a

Out For Buses!

WILLIAM N. McDUFFIE, JR.
Koppers Company, Inc.

pole-type garage 144 feet by 176 feet to house and repair their fleet of 26 buses and 24 pieces of miscellaneous equipment at a cost of \$2.05 per square foot, possibly 50 per cent of the cost of conventional construction.

The reason that pole-type construction is so inexpensive is that it goes up fast, it eliminates costly conventional foundations, and it holds expensive, on-the-job fabrication to a minimum. The weight of the entire structure is supported by sturdy pressure-treated timber poles, anchored deep in the ground. These poles serve as the foundation, wall support and roof tie. Aluminum or steel siding is nailed directly onto wooden stringers connecting the poles to each other. Roofing of the same material is nailed to wooden rafters which, again, are entirely supported by the poles.

Pole-type construction is practical not only because of the inherent structural strength of wood, but because wood's usual vulnerability to attack by decay, termites and other wood-boring insects is eliminated by the pressure-treating process.

This preservation process is not just a surface treatment. It involves a highly technical, controlled process of impregnating chemical preservative deep into the cells of wood by high temperatures and pressure. Practically all of the utility poles which carry the nation's power and telephone lines have been treated this way for years.

In spite of the severe exposure conditions such utility poles receive, they have proven they will remain strong and sound for 40 years and more. Essentially

the same kind of poles go into pole building. Because they are protected on the inside of the building, it is logical to expect them to serve their purpose even longer.

Flexible Construction

One of the outstanding features of pole-type construction is the ease with which a building can be altered in shape or size. Because the walls are not load-bearing, it is a simple matter to add a section or wing simply by removing the siding in the appropriate area and extending the pole construction. When proper foresight has been exercised in the beginning to assure the availability of land area for future expansion, there is no need to over-build at the time of original construction and no great problem when additional garage space is needed.

Another aspect of flexibility was exploited by the Midview School District at Grafton, Lorain County, Ohio. To keep first construction costs to a minimum, the bus storage area was unfinished on the inside. It was not even necessary to pave the floor. The interior of the adjoining maintenance section was fully sealed and paved in concrete, heated, and equipped with servicing tools and supplies. Result: at a minimum cost, the Midview School District has permanent shelter for its school buses, plus a well equipped maintenance shop, plus unlimited flexibility for future expansion or alteration.

What about maintenance and upkeep costs? The answer is, little or none is expected. There is nothing to deteriorate. The poles never need painting. They

will stand unaffected by corrosion, decay, and insects for years. The same is true of certain types of siding and roofing. And pole buildings are strong — built to withstand heavy snow loads and wind velocities of 100 miles per hour. Pole construction is just as sturdy as it is permanent.

As with other types of construction, pole buildings are being built with all the conventional styles of roofs. While the gable roof is probably the most frequently built, flat roofs and shed types are also being used. Inside, the buildings can be free and clear of structural obstructions; clear spans of 40 feet are conventional, and wider spans can be specified at additional cost.

Pole building construction is a type of building that any capable contractor can undertake. There are, across the nation, contracting firms which have made a special study of the method, in conjunction with Koppers engineers. To a great extent, they are engaged in industrial and commercial building projects, but their services are readily available to schools and institutions with similar building problems.

The economies and user benefits of industrial-commercial pole buildings are presented in a new, 20-page brochure currently available. Liberally illustrated, the brochure also supplies actual cost information for a variety of pole building applications.

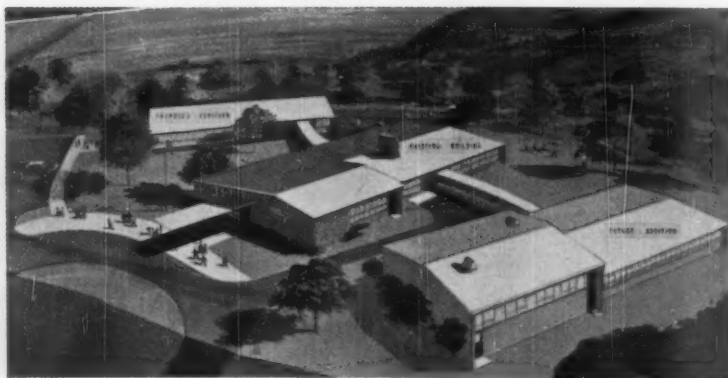
For cost-conscious school boards operating a bus fleet of any size, pole-type construction certainly warrants serious consideration. ■



This pole garage offers low-cost (\$2.05/sq. ft. shelter for 50 buses plus district supplies.

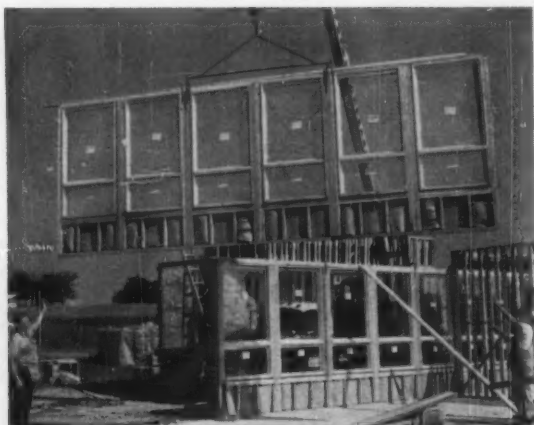
Notable New Schoolhouses

school building
scrapbook



PUBLIC APPROVES PLAN STEP BY STEP

The North Collins, N. Y., Central school district #1 has presented a plan of many phases one unit at a time for the public's vote. Go-ahead has already been given to the proposed elementary school addition (above). The state will foot half the \$375,000 total cost.



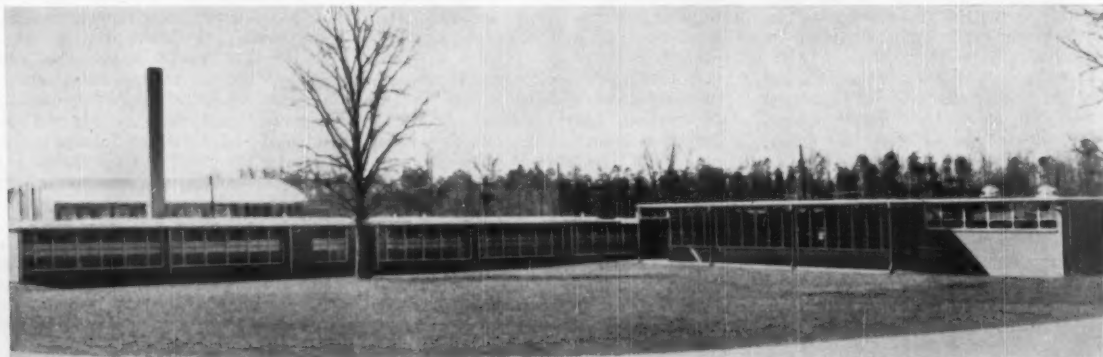
MANUFACTURED SCHOOL BEATS CLOCK

On July 13 the first walls of the Sussex, Wis., Nu-Day Grade School were raised in a race against a seven-week deadline. Pre-manufactured walls trucked from Madison to Sussex, near Milwaukee, were lifted into place by crane (see above). The 11 classroom school has a gymnasium and library.



"OPEN BOOK" STADIUM MOVED 1½ MILES

Penn State University's Nittany Lions will roar this Fall from an all-steel liar that has been moved 1½ miles from its old site and enlarged from a 30,000 to a 45,000 seating capacity. A new all-concrete structure would have cost \$750,000 more than this so-called "open book" stadium, reportedly the largest all-steel deck stadium in the country.



LONG SPAN STEEL DECK CUT COST IN HALF

The new 16-classroom Bonlee-Goldston Consolidated High School in Chatham County, N. C., cost only \$6.45 per square foot. Built on a 20-acre site to accommodate 480 students, the school uses long span steel deck sections, which reduce construction time by more than 30 per cent.

How this district's taxpayers saved over \$1.6 million in five years

Pay as You Go Pays Off for Redondo Beach

BERNARD GAREN

Deputy Superintendent

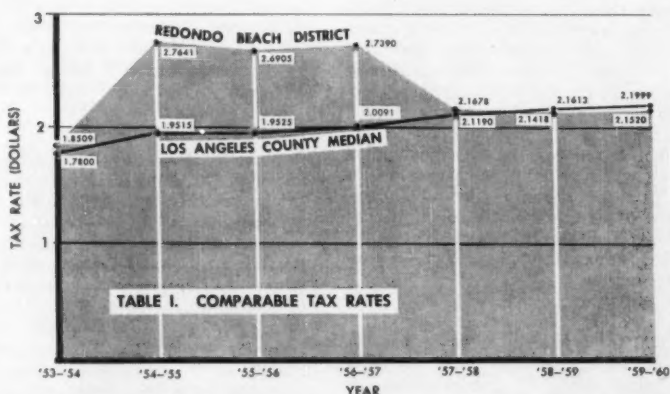
Redondo Beach, Calif., City Schools

This is the story of how community effort and long range financial planning, using the pay-as-you-go method, turned a school district with nine schools, one-third of which were unsafe and inadequate, into a school district of 16 schools, all of which are modern and safe. The public school system is one of this community's greatest assets.

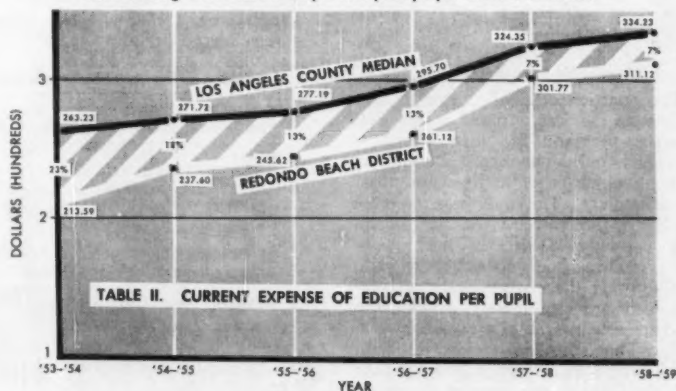
In the spring of 1954 the Board of Education of the Redondo Beach (Calif.) City School District, upon the urging of its constituents, abandoned one third of the school buildings because they were judged by independent engineers to be structurally unsafe. These schools, one built in 1914 and the other two in 1924, did not conform to the Field Act (California's mandatory structural engineering code to adequately provide protection against earth shocks), and also were educationally obsolete. The citizens urged replacement of these structures, in spite of the fact that over 1412 or 21 per cent of the 6598 pupils then were on half-day sessions. This overcrowding of the schools was the result of the school district's inability to keep up with the influx of pupils into the growing territory.

Catching Up on Needs

In the 1952-53 school year, 574 out of 5542 pupils were on half day sessions; in 1953-54, prior to the abandonment of the three schools, 1412 of the 6598 pupils were on half-day session. As can be seen, the school district was not building school facilities rapidly enough to keep up with the enrollment increases. Then, in the spring of 1954,



Graphic illustration of how decreasing tax rates in Redondo Beach in comparison with the Los Angeles County median has meant an increasing education expense per pupil in the district.



Overcrowded and antiquated schools were eliminated and interest costs saved in

Redondo Beach's \$4 million, tax-override financed building program

three existing school buildings were abandoned, which placed 4392 out of 6646 pupils enrolled on half day sessions. In the main, all boys and girls in Grades 1-6 were on half-day sessions. In the 1954-55 school year, \$730,644 were spent on school construction, but most of the new buildings were not ready for occupancy until the following school year. As a result, 4321 out of 6715 pupils were on limited schedule and half-day sessions were only slightly reduced. During the 1955-56 school year, \$651,424 were spent on new buildings and the major effect of the preceding year's construction was felt. As a result, only 613 out of 6993 pupils were on short session. In the 1956-57 school year, \$783,405 were spent on new construction and even though the school enrollment increased almost 600 to 7591 pupils, all pupils attended full time classes. In the 1957-58 school year, \$885,226 were spent on new construction and, while enrollment increased to 7833, all pupils were on full sessions. During the 1958-59 school year \$793,881 were spent on the erection of school facilities, and the enrollment increased to 8099 and all pupils attended regular sessions. In the 1959-60 year there were 8369 pupils, all of whom went to school full time.

The board of education building policy was first to erect classrooms. In the past few years, as the rate of increase of enrollment slowed down, the building facilities constructed have included fewer classrooms and more auxiliary spaces.

In the years between 1954 and 1959, the board of education expended \$3,844,600 for capital outlay on a pay-as-you-go basis. Facilities built included 126 classrooms, 11 kindergartens, 3 multipurpose rooms, and 9 administrative areas consisting of the principal's office, public space or building office, nurse's space, conference room, and a workroom, rest rooms, and a meeting area for the teachers.

Bond Alternative Rejected

The question originally arose as how to finance the just outlined school construction program. The board of education had only two real alternatives, both of which required the consent of the electorate. The first was to vote bonds to the capacity of the school district—only \$180,000—and apply for a state school construction loan. In California the state school construction loan program merely extends the bond indebtedness limits of school districts. The state loan for Redondo Beach would have been a 40-year loan with the interest rate varying according

to the rate currently paid by the State of California for the money borrowed. In addition, the California State Department of Education would have exercised more control over the school plant planning than it could legally exercise when Redondo Beach builds with its own funds.

The second alternative available to the board was a pay-as-you-go construction program, made possible by an increased tax rate noted by the electorate. The sum of \$3,844,600 was made available to the board of education by a tax override election. This method was chosen because it was the most economical, allowed the board of education maximum control in its schoolhouse planning, and seemed the best solution to the continuing problem of building need. Building with bond money was not deemed advisable because school bond interest rates would have exceeded four per cent. It is conservatively estimated that the pay-as-you-go plan saved the taxpayers of the Redondo Beach school district no less than \$1,608,880 in interest. Although the school facilities might have been built at a slightly faster rate with bond funds, this was not deemed worth the increased costs.

Results of Program

What has been the effect of the pay-as-you-go program on the total school tax rate of the Redondo Beach district? To measure the effect of the financial planning of the pay-as-you-go program the tax rate should be compared with school districts of equal responsibility in somewhat the same area. This was computed for 62 school districts of the same responsibility in Los Angeles County.

In the 1953-54 school year, before Redondo Beach went on a pay-as-you-go program, the district ranked 23 from the top comparable school tax rate in Los Angeles County. The changes in the Redondo tax rate may be seen in the following table:

TABLE I. Comparable Tax Rates

Year	Redondo Beach District	Los Angeles County Median
1953-54	\$1.8509	\$1.7800
1954-55	2.7641	1.9515
1955-56	2.6905	1.9525
1956-57	2.7390	2.0091
1957-58	2.1678	2.1190
1958-59	2.1418	2.1613
1959-60	2.1520	2.1999

In 1959-60 the Los Angeles County median tax rate rose to \$2.1999 while Redondo Beach's ranking dropped to 40th among the districts with a tax rate of \$2.1520.

The foregoing figures reveal that the Redondo Beach City School District's school tax rate has been going down since 1957 while the tax rate in like districts in the same locale have been going up. There is no reason to believe that this downward trend will not continue and, even though Redondo Beach is a district of only average wealth, its tax rate is lower than districts of greater wealth. This all due to the long range financial planning.

A common criticism made of school districts on a pay-as-you-go school construction plan is that this procedure takes money away from current outlays for education. A study of the Redondo Beach current expenditure per unit of average daily attendance as against the expenditures in all the Los Angeles County districts reveals the exact opposite. Redondo Beach per pupil expenditure, although below the county average, has decreased from 23 per cent below before the school district went on a pay-as-you-go in 1953-54 school year to only 7 per cent below in the 1958-59 school year.

Pay-as-you-go has paid off for Redondo Beach. While it has lessened the local tax burden, it has eliminated short school sessions, kept up with the building needs, provided needed auxiliary building spaces, increased current expense expenditures per pupil so as to approach the Los Angeles County average, reduced the bonded indebtedness and kept the classload of less than thirty, which is below state and county averages for elementary schools.

TABLE II. Current Expense of Education Per Pupil

Year	Los Angeles County Average	Redondo Beach	Per Cent Below Los Angeles County Average
1953-54	\$263.23	\$213.59	23
1954-55	271.72	237.60	18
1955-56	277.19	245.62	13
1956-57	295.70	261.12	13
1957-58	324.35	301.77	7
1958-59	334.23	311.12	7

The matter was put up to the voters on November 4, 1958, and the \$3.8 million bond issue was approved by a two-to-one margin.

Holding the general construction contract of \$2,334,000, is the Navarro Corp.; electrical work, \$318,000, Gustav Hirsch; plumbing contract, \$245,697, Ted Walsh & Son; and, heating and ventilating, \$322,450, Steel City Piping Co. ■

How's the education enterprise?

Big and Booming

ELAINE EXTON

Whether measured in terms of the number of persons who are directly or indirectly affected, by the amount of money expended, or by any other yardstick, education in the United States is big business.

The Outlook Ahead

America's schools opened their fall terms this September with more students, teachers, and classrooms than ever before. Nor is any immediate slackening in this upward surge in sight.

Birth rates are expected to remain high during the 1960's when more than 40 million babies will be born in the United States, according to a U. S. Department of Labor and Census Bureau projection which pictures the nation's population growing from 180 to 208 million people during the next ten years. The anticipated net increase is about 28 million for the decade (allowing for expected mortalities), or nearly three million a year, the same as in the 1950-60 period.

The Decade Behind

During the decade (between the 1949-50 and 1959-60 school years) the total enrollment in the nation's public schools rose 44.5 per cent, soaring from 25,185,436 in 1949-50 to an estimated 36,399,802 pupils for the school year 1959-60. The total number of public school teachers grew at an even faster rate (47.6 per cent) expanding from 913,671 in 1949-50 to an estimated 1,348,567 teachers in 1959-60, and the total public school instructional staff (including administrators, supervisors, counselors, and other special personnel as well as teachers) advanced 51.3 per cent over the decade, reaching 1,455,335 in the 1959-60 school year.

During this period current expenditure for public elementary and secondary education shot up 154.1 per cent in its climb from \$4,687,274 in 1949-50 to \$11,910,269,000 for 1959-60. The expenditure per pupil in average daily attendance leaped from \$210.34 in 1949-50 to an estimated \$369 in 1959-60, a jump of 75.4 per cent.

Although the major support of public schools continues to come from state and local sources, a slight increase in federal financing occurred during the past decade as total revenue receipts for public school operations rose from \$5,-

437,044 in 1949-50 to \$13,472,194 in 1959-60. At the beginning of the decade 57.3 per cent of these receipts was derived from local, 39.8 per cent from state, and 2.9 per cent from federal sources. In 1959-60, 3.6 per cent of the money for public school operation came from the U. S. Government, while 40 per cent was of state and 56.4 of local origin. (Figures culled from *Estimates of School Statistics, 1959-60*, N.E.A. research study).

That a greater percentage of our national income was spent for education in 1957-58 (5.39 per cent) than in 1947-48 (3.32 per cent) is related in an Office of Education report on *Progress of Public Education in the United States of America, 1959-60*, which states that the per capita expenditure (based on the entire population of continental United States) increased from \$46 in 1947-48 to \$116 in 1957-58, a growth of 153 per cent.

For the 1959-60 school year the Office of Education estimates the total expenditure (including capital outlay) for elementary and secondary schools and higher education, public and private, in the United States amounted to \$24.852 billion. Of this sum \$15.805 billion was spent for public elementary and secondary education and \$2.817 billion for private schools.

School board members may find it interesting to compare the developments in their own school districts with the national trends reflected in the above figures and in the medley of statistics from U. S. Office of Education, Census Bureau, and National Education Association sources which follows.

Rising Enrollments

Rising for the sixteenth consecutive year, enrollments in the regular public and private schools and institutions of higher learning in the nation (kindergarten through college) will reach a new all-time peak of 48,650,000 students in the United States in 1960-61, according to Office of Education forecasts. This is nearly two million pupils more than last year.

Most of this gain will take place in public and private elementary and secondary schools where an over-all increase of 1.7 million pupils is expected. The total enrollment for kindergarten

through grade eight is estimated at 34,380,000—a million more than last year, while in grades nine through twelve, a rise from 9.59 million to 10.29 million is anticipated. The public schools account for 1.4 million of this over-all increase, the parochial and other private elementary and secondary schools for 300,000 of the rise (6.8 million pupils in 1960-61 compared to 6.5 million in 1959-60) in these Office of Education projections.

Findings of a *Current Population Survey* by the Bureau of the Census in October, 1959, place the total school enrollment, public and private, in the fall of 1959 at 44.4 million. This figure includes some 2 million children in kindergartens, 29.4 million in elementary schools (grades one through eight), 9.6 million in high schools (grades nine through twelve); and 3.3 million students in colleges, universities, or professional schools.

During the five years from 1954 to 1959, the Census Bureau reports, total enrollment in public and private schools and colleges climbed at an average rate of 1.7 million annually. A million of this yearly increase was at the elementary level. Kindergarten enrollments rose by about 100,000 each year, on the average, while during the same period the high schools gained almost 400,000 pupils a year, and the number of college students advanced by an annual average of nearly 200,000.

Private schools below college level have been absorbing a relatively larger share of the expanding enrollment than have public schools, according to the Census Bureau data which records that the percentage of kindergarten and elementary grade pupils in private schools mounted from 12.7 to 16.1 per cent between 1954 and 1959 while the per cent in private high schools went up from 8.8 to 10.9 per cent in this same period.

Noting that the number of students in our nation's schools and colleges (public and private) expanded from 29 million to 44 million between 1947 and 1959, an increase of 55 per cent, the Census Bureau attributes this growth not only to school-age population increases from rising birth rates but also to the fact that larger percentages of children are entering and remaining in school.

During these years the number of five- and six-year-olds attending kindergarten or elementary school rose from four to six million, the number of pupils aged 14 to 17 went from seven to ten million and the number of students 18 to 34 years old in public and private educational institutions increased from roughly 2½ to about 3½ million.

The rapid rise in enrollment of five-year-olds, the Census Bureau explains, "reflects, primarily, the tendency for children at this age in more and more parts of the country to be entered in kindergartens." It says the increasing enrollment rates at ages 16 and 17 point up the growth in the holding power of the high schools.

(Concluded on page 44)

the AMERICAN SCHOOL BOARD JOURNAL

William C. Bruce, Editor

YEAR-ROUND SCHOOLS

THE problems of the summer use of school buildings and of the all-year school seem no nearer a solution than they were thirty years ago. At least the new publication of the AASA entitled, "Year-Round School," offers disturbingly little advice on utilizing the three summer months for extending or broadening the education of children, much as this extension is needed.

There is no present answer to the criticism of citizens and of numerous educators that there is a huge waste in allowing the school plant in some 40,000 school districts to lie idle for three months of the summer. Children are no longer wanted for work in the fields. In the cities, the lack of occupation makes for waste of time, unrest, and frequently disorder. There is a real need to do something constructive for the education of children during at least a portion of the months of June, July, and August.

This latest AASA document on the all-year school rightly disposes of the proposal that the year be divided into four quarters of twelve weeks each, and that all children be required to attend at least three of the four quarters of twelve weeks each. This arrangement, which would allow all children to have four weeks' vacation in at some time of the year, involves administrative difficulties which could be overcome only in the large cities.

A second plan suggests a 48-week school year for all, with a summer vacation of full four weeks. The fact that this plan was a failure in Newark, Nashville, and Fairfield, Conn., under conditions existing from ten to forty years ago, is adduced as an irrefutable argument that the program is not a possible solution of the problem.

A third plan would provide voluntary summer schools of the kind we now have, and would open up opportunities for wider and richer education, for giving gifted children a chance to take special subjects, for permitting backward children to repeat work in which they had failed, and to offer average children a wide variety of work in shop and laboratory and enriched academic subjects. The arrangement would cost additional money for teachers' salaries and plant operation but would be voluntary.

A fourth plan would continue the school year as at present for 36 to 40 weeks, and would require teachers to devote from eight to 12 weeks of the summer to professional improvement. The teachers would be expected to work on the curriculum of the local school system, develop new lesson plans and instructional methods, or, with permission of the school board, attend professional summer schools. The teachers would be paid for full 12 months. This last mentioned plan seems to have high approval and a trial, in the opinion of the AASA. It would increase

the current expense budget from 10 to 20 per cent in many school districts.

The present study includes so many cautions and calls attention to so many difficulties that few school boards will be inclined to make experiments leading to an approach to the year-round school. At most they may lengthen the school year by two, or even three weeks, and expand the conventional summer school to reach more children and to teach more subjects. All of which still confronts the school boards with the fact that life is now different, that children must develop more competencies in all aspects of life and more vocational skills, and that the summer months should be utilized to meet these ends. It must be added that the summer waste of school personnel and school facilities reflects on the inventiveness and dedication of all school authorities. There is need here for a new leadership from professional sources. The school boards will support any experiments that offer reasonable hope for success.

SCHOOL BOARD SUCCESS

IN A recent book entitled, *The Effective Board*, Cyril O. Houle sets up four tests for determining the success of a board operation. He holds that superlative performance in any aspect of life, particularly in the work of a board, looks far more simple than it is. The ultimate test of any board is the success of the program of the institution or agency which it directs. He observes that there is no point in having a board if the basic purpose of the institution or agency has not fully been achieved. The best test of a board is the extent to which it conforms to sound principles of good board practice. He adds that an agency might be successful in spite of the board, without any great contribution from it, but ordinarily good principles are associated with good programs.

A fourth test he sets may be applied in the form of 12 points of success which every board should meet. Any board member may check himself and the functions of the board on which he serves by determining in his own mind whether the board is excellent, good, average, poor, or very poor, in each of the 12 points. A profile of success can easily be worked out on such a self-rating. The points which Mr. Houle recommends are as follows:

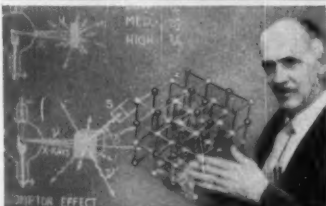
1. The board should be made up of effective individuals who can supplement one another's talents.
2. The board should represent the interests which are to be consulted in formulating policy.
3. The board should be large enough to carry all necessary responsibilities but small enough to act as a deliberative group.
4. The basic structural pattern (board, board official, committees, executive, and staff) should be clear.
5. There should be an effective working relationship between the board and the executive and staff.
6. The members of the board should understand the objectives of the agency or association and how those objectives are achieved by the activities undertaken.
7. The board should have a feeling of social ease and rapport.
8. Each member of the board should feel involved and interested in its work.
9. The board should formulate specific goals to guide its work.
10. Decisions on policy should be made only after full consideration by all parties concerned with the decision.
11. The board should be certain that effective community relationships are maintained.
12. The board should have a sense of progress and accomplishment.

The ninth and twelfth points are of greatest importance to public school boards.

Camera shoots through microscope in filming of Complete Basic Chemistry Course with Dr. John Baxter.



Atomic model used to demonstrate cubic crystal structure. Complete Introductory Physics Course on Film with Dr. Harvey White.



What Happens in Hamlet: from 12-film series, Introduction to the Humanities Based Upon Great Dramatic Literature.



Encyclopaedia Britannica Films New Catalog No. 31, "The Unique Contribution". More than 1100 films for all levels of education plus complete courses on film in Chemistry and Physics.

Films Incorporated New Catalog No. 61, "Profile of The American Film". The world's finest 16mm library. The most important selection of Hollywood feature films and short subjects from the major producers and independent studios.

On location for shooting of Cave film, in new EBF Biology Program.



The Unique Contribution



Today, as never before, the teacher is recognized as a vital member of our society. In short supply, overburdened, under pressures unlike any faced by his predecessors, the teacher realizes with increasing conviction that he must evaluate every teaching tool against the real contribution it can make to the learning process under his supervision.

What is needed now as never before is the sure knowledge that there is a "unique contribution" inherent in every modern aid used in the classroom. We have made these words—"the unique contribution"—a standard of utility and excellence over the years, and they are still the basic criteria used to determine whether a sound motion picture should be made and released by us for classroom use.

Uncounted teachers who have used EBF films since they pioneered the audio-visual field more than thirty years ago know how to identify the potent effectiveness of these materials. And thousands more, newer in the field of teaching, have come to learn that the EBF symbol is an assurance of satisfaction and genuine help in the teaching experience.

Maurice B. Mitchell
President, Encyclopaedia Britannica Films

ENCYCLOPAEDIA BRITANNICA FILMS, INC.

1150 Wilmette Ave., Wilmette, Illinois



Encyclopaedia Britannica Films, Inc.

1150 Wilmette Avenue, Wilmette, Ill.

Please send the following:

- ☐ EBF Catalog No. 31, "The Unique Contribution"
☐ Films Inc. Catalog No. 61, "Profile of the American Film"
☐ EBF Filmstrip Catalog

Send us complete information on

- ☐ Physics Course ☐ Chemistry Course
☐ Biology Program ☐ Humanities

NAME _____

SCHOOL _____

STREET _____

CITY _____ ZONE _____ STATE _____

ASJ 1060

DRIVOTRAINER—MODERN WAY



ON THE HIGHWAY IN THE CLASSROOM

—Stationary cars, a series of special training films and an automatic score recording unit are basic components of the Drivotrainer classroom system. By multiplying the number of students that can be taught by one instructor, Drivotrainer permits more efficient use of teaching time available.



A LIFETIME OF DRIVING EXPERIENCE

is duplicated by the film series used. Photographed from a moving car, films project on the screen what student would see through his own windshield. Students can be drilled in a full range of highway emergency situations until a satisfactory level of proficiency is achieved.

*Be sure to
register and vote*

TO BETTER DRIVER EDUCATION

Helps teach more students faster, at lower costs

Faced with the need to provide effective driver education and training to an increasing number of students, high schools across the country are utilizing the Aetna Drivotrainer system of classroom instruction. With the Drivotrainer, an electro-mechanical teaching aid, one teacher can instruct as many as twenty-four students at the same time. Because students can "drive" through all kinds of situations *before* actually going on the road, safe driving skills, proper attitudes and sound judgment can be developed without any risk to life or property. Used to supplement behind-the-wheel instruction and experience, Drivotrainer offers these important advantages:

Better educational value—students are exposed to a wide range of learning situations, can be conditioned to react quickly and correctly to emergencies—the real test of driving ability.

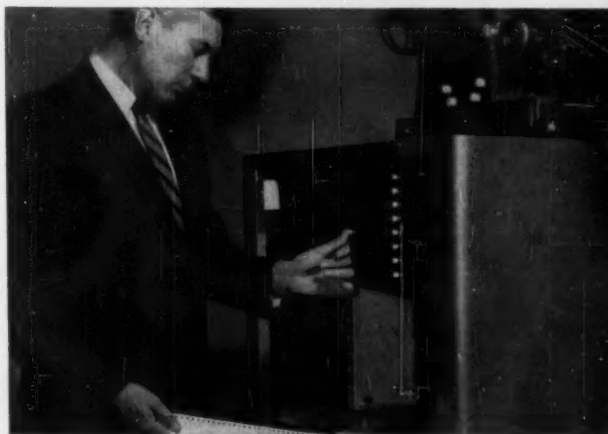
Saves teaching time—hours needed for on-the-road instruction in dual-control car can be cut in half, still meet required standards.

Cuts costs per pupil—training more students in less time, *without* increasing the teaching staff, results in measurable economy.

The Drivotrainer system was originally developed as a public service by the Aetna Casualty and Surety Company through extensive work with a panel of nationally known educators. To carry this program forward, Rockwell Manufacturing Company is now producing and distributing the Drivotrainer for use in schools as well as for application in the re-training of experienced drivers. For further information on the Drivotrainer installation best suited to *your* needs, write: Rockwell Manufacturing Co., Drivotrainer Division, 401K N. Lexington Ave., Pittsburgh 8, Pa.



FULLY EQUIPPED with all essential instruments and controls, cars can be used for teaching both conventional and automatic shifting, simulate motor noise and brake pedal "feel" for added realism.



AUTOMATIC SCORING SYSTEM records student actions on master sheet, enabling instructor to follow individual performance as well as indicating level of class progress.



WORD FROM WASHINGTON

(Concluded from page 39)

To instruct the burgeoning school population in the new academic year (1960-61), 1,636,000 classroom teachers will be needed by public and nonpublic elementary and secondary schools in the 50 states and the District of Columbia. This U. S. Office of Education estimate is almost 4 per cent higher than the number (1,574,000) employed in 1959-60.

An Office of Education survey undertaken in the fall of 1959 found 1,367,000 full-time and part-time classroom teachers working in the nation's public schools, 840,000 at the elementary and 527,000 at the secondary level, 61,000 more than a year earlier, a gain of 4.6 per cent.

According to the National Education Association's report on *Teacher Supply and Demand in Public Schools, 1960*, the number of bachelor degree graduates prepared to meet certification requirements is up 8.3 per cent, totaling 129,295 in the class of 1960 as compared with 119,421 potential teachers in the class of 1959. Unfortunately this enlargement in the new supply from which to fill teaching posts falls far short of meeting the total of 230,000 additional public school teachers estimated as needed in September, 1960, in Ray Maul's latest study.

Taking into account the fact that in recent years only about 72 per cent of the newly graduated potential teachers actually took teaching jobs, he considers that the new 1960 crop will provide only about 103,000 teachers so that at least an additional 100,000 will have to be sought from other sources with the result that while some of those hired to fill the vacancies will be qualified former teachers who return to the profession, many will be of doubtful competence.

The estimated shortage of 230,000 public school teachers released by NEA is predicated on these 5 needs:

1. To replace teachers leaving the profession 110,000
2. To accommodate increasing enrollments 30,000
3. To relieve overcrowding and eliminate part-time sessions . . . 30,000
4. To offer needed services and instruction in courses not now provided 20,000
5. To replace the unprepared . . . 40,000

Moreover, the new crop of potential teachers is not divided among the fields of teaching service according to the vacancies that exist. Of the 1,367,000 public school teaching positions reported by the Office of Education in the fall of 1959, 840,000 were at the elementary and 527,000 at the high school level, a ratio of eight elementary to five high school teaching jobs. Just the reverse ratio exists, however, among the newly graduated potential teachers, i.e., 80,000 were prepared for teaching high school subjects and 50,000 for elementary school service. This disparity has been increasing since 1955.

From another NEA survey, *Estimates of School Statistics, 1959-60*, we learn that there were 836,960 public elementary school teachers in the school year 1959-60, a 42 per cent increase over the number (604,131) so employed in 1950-51. In that same period the number of secondary school teachers went up 57.9 per cent, rising from 323,486 in 1950-51 to 511,607.

The same source reveals that emergency teachers have comprised between 7 and 8 per cent of the total teaching force since the school year 1950-51. It reports a slight improvement in the proportion of emergency teachers to the total number of classroom teachers during this period.

For the nation as a whole, in the school year 1959-60, 72 per cent of the total number of public school teachers who lack full certification (94,016) were in elementary schools, 59 per cent were teaching in rural areas, and 54 per cent had less than four years of college preparation.

Public school teachers were paid an average annual salary of \$5,025 in 1959-60, according to these NEA calculations. In this school year the elementary teachers received an average salary of \$4,835 and the secondary school teachers \$5,334. Whereas in 1952-53, six in ten public school teachers were paid less than \$3,500, this NEA study estimates that in 1959-60 the proportion will be reduced to one in eight. It concludes that by 1959-60 almost six in ten public school teachers will be paid \$4,500 or more a year, almost three in ten will get more than \$5,500, and more than one in ten will receive over \$6,500.

A Census Bureau survey taken in October, 1959, disclosed that, on the whole, the men teaching in public schools below college level "were much younger than the women."

Whereas 52 per cent of the men teachers were under 35, their tabulations show that 32 per cent of the women teachers were this young. Only 27 per cent of the men were found to be 45 years of age or over as compared with 48 per cent of the women. Finding that about 16 per cent of the men and 36 per cent of the women public school teachers were married, the study comments: "Evidently, many men teach awhile before marriage, then shift to educational administrative jobs or other types of employment." Of the 1,362,000 public school teachers reported at that time, about 431,000 were men and 931,000 were women.

There were still 23,695 one-teacher schools in the nation in the school year 1958-59, according to a National Education Association study on this topic, 19.5 per cent of all public schools. These were staffed by 1.8 per cent of all public school teachers and were attended by about 392,390 pupils, or 1.1 per cent of the nation's school children.

Nonetheless, these schools had decreased 88 per cent since the 1917-1918 school year, when 196,037 one-teacher schools constituted 70.8 per cent of all the public schools in America. At that time they enrolled about five million

students, or one fourth of all school children, and employed 31 per cent of all the public school teachers.

To accommodate the record load of students there are more than 1,285,552 public school instruction rooms and related facilities (such as gymnasiums, auditoriums, lunchrooms, principals' offices, and guidance suites) in the United States today.

This official figure for the 50 states and District of Columbia in 1959-60 is 242,306 more than the Office of Education reported in use in the school year 1955-56 (1,043,246) and does not include 62,700 additional classrooms scheduled for completion in 1959-60.

Over the decade 1949-50 to 1959-60 a total of 627,500 new public elementary and secondary schoolrooms were built in the 48 states. This 72.8 per cent rise in school construction could have provided accommodations for roughly 15.7 million students, assuming a class size of 25 and not taking into account the classrooms abandoned during this period. The Office of Education tally shows 63,291 rooms abandoned for instructional purposes in the four school years 1955-56 through 1958-59, the only years for which such figures are available.

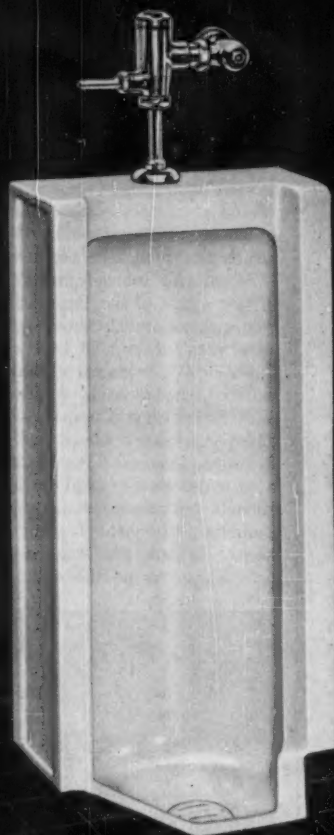
On the basis of a survey taken in the fall of 1959, the Office of Education announced that a nationwide shortage of 132,400 public elementary and secondary classrooms exists, a total which has been widely challenged.

Following a study of the classroom situation in the nine states reporting about half the total shortage, a Budget Bureau team concluded the available statistics do not furnish a sufficiently reliable basis for forming national policy in education. Among their complaints: differences in definition and methods of collecting facts make accurate comparison impossible; some children were counted twice (once as excess enrollment and again as housed in unsatisfactory facilities); some state statistics were projections based on out-of-date studies.

Public elementary and secondary school property in the nation (buildings, equipment, and sites) was worth more than \$30 billion in the school year 1959-60, reported R. N. Finchum, the U. S. Office of Education's specialist in school plant management. His new bulletin on *Organizing the Maintenance Program* also brings out that in excess of \$3 billion a year is being spent for capital outlay for new school construction. Maintenance and operation, including property protection, educational progress, pupil safety, and plant efficiency, is costing an additional \$1 billion annually, an expenditure that is considered likely to increase as new facilities are completed.

Public elementary and secondary school bond sales in the 48 states totaled roughly \$2.112 billion in 1959-60 according to U. S. Office of Education computations. In the school year 1958-59 they amounted to \$1.9478 billion. The peak was reached in 1957-58 when they hit \$2.42 billion. ■

K of K URINALS



BRANHAM. Angled base design simplifies tile-floor installation. (With Metro flush valve, K-4920—TA1.)

Each battery of Branham urinals is pre-assembled and checked for uniform dimensions, to assure level floor line and neat appearance.

Seam covers are also pre-assembled, ground where necessary for perfect fit, and labeled to show reassembly locations. Available for urinals mounted at 21" or 24" center spacing, with permissible variations of one inch, plus or minus.

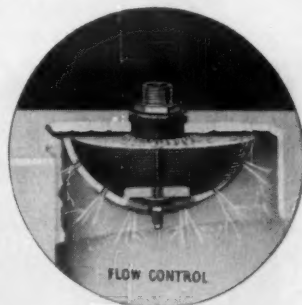
Use of K of K seam covers eliminates need for filling spaces with scrap plaster and cement, which may contract and cause cracks.

Economical maintenance trouble-free service for schools

Design and construction features of K of K vitreous china urinals make them easier to install, provide superior sanitation, and reduce maintenance to a minimum.

Exclusive Flow Control

Delivers a positive, cleansing flush to a single urinal or a battery. Insures uniform distribution of water to *all* battery units. Prevents spraying of water beyond urinal. Accessible for easy adjustment. A feature of the Branham stall urinal, and Bardon and Stanwell, wall-hanging types.



Pre-assembly at factory



KOHLER CO. Established 1873 KOHLER, WIS.

KOHLER OF KOHLER

ENAMELED IRON AND VITREOUS CHINA PLUMBING FIXTURES • ALL BRASS FITTINGS • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS

Johnson Service 75th Anniversary

The 75th anniversary of the establishment of the Johnson Service Company, Milwaukee, recalls some of the earliest efforts of the editor of the *SCHOOL BOARD JOURNAL* to publish materials which would contribute to the improvement of school buildings. The *JOURNAL* not only promoted experiments in heating and ventilation of school-

rooms but also in lighting and better fenestration, and temperature and humidity control of classrooms and other construction areas.

Warren S. Johnson, inventor of the Johnson temperature controls system, was science instructor in the Normal School at Whitewater, Wis., where he found that uneven temperature in his

physics laboratory alternated between shiver and swelter. To improve the situation for better instruction he devised an electric thermostat to turn on or shut off the heat. The device operated on the simple principle that two pieces of metal which have a different coefficient of expansion and contraction could be so joined that changes in room temperature would provide electric impulses to automatically open or close the valves and dampers of classroom radiators. With the help of air pressure in a small copper tube, the electric thermostat would regulate the warmth of a classroom or auditorium within two or three degrees of predetermined temperature.

Warren S. Johnson and Wm. George Bruce, editor of the *JOURNAL*, then were young men and became warm friends after they first met in 1891.

In 1885 Professor Johnson incorporated the business as the Johnson Electric Service Company, and some three years later moved to Milwaukee. He soon succeeded in getting his instruments accepted in a number of schools and fine hotels, as well as office buildings. From the beginning the emphasis in all the company's selling campaigns was on the educational and



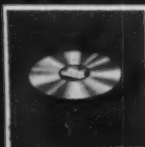
MAGNETIC RECORDING INDUSTRIES

America's Language Laboratory Leader—fulfills your complete needs

*widest range
of simple-to-use,
quality systems*

*plus Vital
Educational
Services...*

*tested and proved
in more than
a decade of use*



NEW MAGNETIC DISC. New fidelity. Instant review. Reusable permanent.



NEW TAPE MAGAZINE. No threading. No mixups. Another MRI development.

NEW FOLD-A-BOOTH. Unified Laboratory Classroom—Another MRI first.



A series of helpful manuals and other materials is available. Write for complete listings.

MRI helps you plan ahead... look beyond your need for easy-to-use equipment—whether you use tape magazines or reels, or the simplest of all, the Magneticon Magnetic Disc.

MRI's growing list of valuable publications cover such important topics as programming and tested methodology for use with standard, automated and remote control systems. Distilled from national seminars and experience in hundreds of installations, they help you achieve maximum teaching effectiveness... maximum utilization of equipment.

All these services are now available through TRW/Educational Electronics Division Headquarters and 30 specialized regional offices, equipped to help you plan the complete language laboratory. MRI/TRW's vast electronic background and unique in-classroom techniques satisfy your requirements regardless of size, purpose and budget.

Write or phone today for detailed information about MRI advanced language laboratory equipment and educational services.

EDUCATIONAL ELECTRONICS DIVISION

Thompson Ramo Wooldridge Inc.

126 Fifth Avenue, New York 11, N. Y. • ALgonquin 5-7250

divisions and subsidiaries serving the educational field:
Magnetic Recording Industries • Doge Television • Bell Sound • Bol Conto • Intellectronics
World's Most Complete Line of Language Laboratory Equipment



Warren S. Johnson

health values of the device; the economic phases were given secondary attention. The "Professor," as he was familiarly referred to, remained a teacher and inventor to the end of his long life. The comfort and educational values for teachers and pupils were his constant concern. That was the reason, too, why he established "service" stations in various sections of the country to keep the "systems" in full operation as long as a school building was in use.

Human Values, Humor in Ads

The human values of temperature

regulation, with here and there a sly bit of humor, characterized the earliest Johnson advertisements in the *JOURNAL*. Thus, in 1895, an advertisement entitled "An Even Temper" called attention of school board members to the value of regulation in the following language:

"An even temperature is conducive to an even temper. The hot tempered school board or the cold, indifferent one usually falls into error. Rash actions by the one and negligence by the other follow. A well balanced school board does not hesitate to look into the merits of things. The Johnson System of Heat Regulation has never been adopted without the closest examination. It has stood the test in hundreds of schools and other public buildings."

In the same year an advertisement headed "Regulation" called attention to the necessity of controlling given school activities on a democratic basis.

"Regulation is a rule of life—a rule for all human activity. Regulation of supply and demand, activity and rest, superfluity and want, heat and frost, etc.—in fact, a tempering of all extremes. It, therefore, stands to reason that a systematic regulation of the heating in buildings will not only avoid all extremes, but will insure an even temperature. And that means a saving from year to year."

The same advertisement showed a woe-begone, poorly dressed janitor of a public school visiting a portly physician. The following dialogue is reported:

Mr. Jones: Doctor, I have not been feeling well of late.

Physician: Man, you look it. System seems to be run down.

Mr. Jones: I am the janitor of the Hot and Cold Schoolhouse.

Physician: Ah, now I understand. Uneven temperature. That school has been making patients at a rapid rate. Pupils and teachers have been ailing. Now even the janitor comes to me.

Mr. Jones: Yes, it seems impossible to keep an even temperature. Now hot, now cold.

Physician: What you and your school-house need is regulation—I will, therefore, prescribe the Johnson System of Heat Regulation. It will preserve an even temperature and prove a saving to the health of the pupils and the school treasury.

It is interesting that in the same year (1895) the Johnson System was installed in one of the earliest central school administration buildings, the St. Louis, Mo., Board of Education and Library Building. Typical installations, as illustrated in the advertising, were the large four-story and five-story school buildings erected in the Borough of Manhattan, New York City, from the plans of the most widely known school architect of the decade, C. B. J. Snyder, official architect of the New York system.

Among the earlier inventions of Pro-

fessor Johnson were the supersensitive gradual-acting thermostats and a humidity regulating instrument, the Humidostat, which found relatively small use in schools but wide applications in industry. The "dual" or day-and-night and weekend thermostat, still widely used, permitted schools to make considerable economies by cutting temperature when classes were not in session.

Research, an obsession of the founder, has characterized the work of the company and has led to numerous inventions and improvements in Johnson apparatus. The company is presently engaged in a long-range research program

to continue its tradition of progress. Its systems are installed in all types of commercial, industrial, and public buildings, as well as in commercial and military ships, and in national defense installations. Today, the Johnson organization maintains 108 direct branch offices in the United States and Canada. It sells only custom-planned control systems, each of which is installed by the company's own men. Full-time, factory-trained service mechanics are available to patrons in more than 200 cities. Its headquarters and manufacturing plant are located in Milwaukee, Wisconsin. ■



pioneer in Educational Television—
fulfills your complete needs

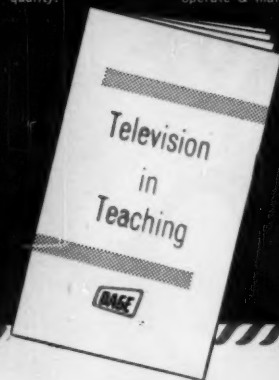
easy-to-use,
easy-to-keep-
in-use
modular
equipment
plus Tested
Teaching
Techniques



MODEL 320-B/V
CAMERA: Full professional broadcast quality.



SYSTEM ETS-1: Compact, flexible, mobile. Easy to operate & maintain.



Dage experience in educational TV, available through TRW's Educational Electronics Division, brings you many benefits beyond equipment planning and installation.

You'll discover many helpful ideas and techniques, for example, in "Television in Teaching," our latest publication. From a teacher's point of view, it discusses educational TV's potential, its contributions to teaching and efficiency...traces the steps in starting a program.

On-the-scene consultation and training, backed by TRW electronic and teaching know-how, can help you plan the complete Educational TV system...to meet today's...and tomorrow's...needs. Start small—as little as one camera and viewing monitor—or with the largest system; confident that equipment will not be obsolete, regardless of growth.

Write or phone today for information about Dage Educational Television Equipment and educational services—and your copy of "Television in Teaching."

EDUCATIONAL ELECTRONICS DIVISION

Thompson Ramo Wooldridge Inc. 

126 Fifth Avenue, New York 11, N. Y. • ALgonquin 5-7250

divisions and subsidiaries serving the educational field:

Magnetic Recording Industries • Dage Television • Bell Sound • Bel Canto • Intellectronics

Design a school



for active learning

One investment in the Nesbitt 600 Line gives you the thermal comfort most conducive to learning plus the utility of flexible storage units—both important aids to creative teaching and pupil participation

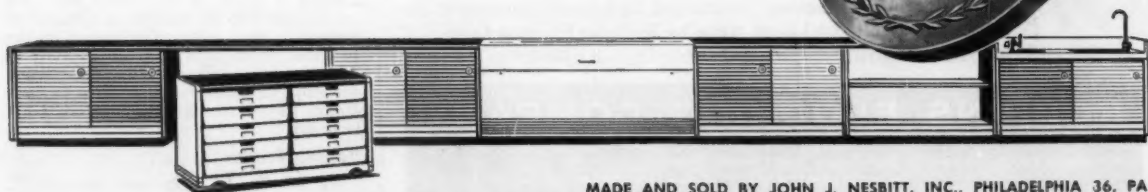
*N*ew physical facilities for schools are major investments for 30 to 50 years. The comfort-conditioning units for individual classrooms are such an investment. So are the versatile storage cabinets that make for a flexible classroom. Combining both these requisites into one colorful window-wall ensemble is the sensible and economical idea originated and developed most adequately by Nesbitt. In choosing such equipment to serve your school for the next 40 or more years, it is wise to consider how well the supplier has served for the *past* 40 years. Nesbitt *future* service can be trusted to fulfill this policy instituted in 1917: Nesbitt responsibility only *begins* with the sale and *continues for the life of the building*. This is why you should see the new Nesbitt 600 Line.

Comfort and utility tailored to your needs

Nesbitt offers each classroom these tools for active learning: a Syncretizer heating, ventilating and natural-air cooling unit—or a Year-Round Syncretizer, which is equipped to incorporate mechanical cooling and dehumidification in warm weather; integrated Wind-o-line radiation for extra protection if required; an integral full-length display board shell or work counter; and fixed or mobile, open or closed storage and utility cabinets—including adjustable and interchangeable shelves, cubicle dividers, racks and tote trays—and a stainless steel sink-bubbler unit . . . all available in a variety of modern basic and accent colors.

■ A longer school year is looming as an economic necessity.

By early consideration of your building design, you may be able to incorporate year-round air conditioning within a normal budget. For valuable information, send for Publication SP-1060.



MADE AND SOLD BY JOHN J. NESBITT, INC., PHILADELPHIA 36, PA.

Sold also by American Standard Industrial Division, and American Standard Products (Canada) Ltd.

NEW BOOKS

The Effective Board

By Cyril O. Houle. Cloth, 174 pp., \$3.50. The Association Press, New York 7, N. Y.

The present book has been long needed by numerous American citizens who hold office on a public board or private corporate board in charge of some important social, educational, or governmental activities. The author, who has for many years taught training classes for board members in a variety of fields in Chicago, has reorganized his lectures on a logical basis. He presents here the fundamental principles upon which public and nonprofit corporate boards can be successfully organized to carry on most effectively the work of the organization or institution. The book

is of especial interest to public school board members in the fact that the author has a broad, confident viewpoint, somewhat informal, and has made the text interesting by unexpected bits of wisdom gained from experience and observation in a wide variety of situations.

The first chapter introduces the reader to the history and major functions of boards in charge of schools, hospitals, libraries, and other public and private agencies. The major tasks of boards, of their chairmen and other officers, particularly their committees, are outlined. The human side of a board, with considerable information on the selection of board members, their induction into office, and their continued education are discussed in Chapter Two. Basic principles for improving the organization of boards through the development of a constitution or a condensed statement of the public laws author-

izing and limiting the work of a given board, a statement of policies, and the writing of board minutes are outlined in Chapter Three. The relations of boards and their members to their professional staffs and to the community or organization which they represent are described in a very practical fourth chapter. The final section of the book is devoted to a variety of topics on human and functional problems which in the author's observation spell the difference between success and failure of a board.

School board members may disagree with some of the statements in the present work which varies from the point of view insisted upon by professional writers on school administration who are concerned about the authority and freedom of the superintendent and of the members of his professional staff. It would be helpful if the book introduced some discussions of executive meetings of boards and the necessity of making all ordinary meetings open to the public. It may be questioned whether public-school board members will agree with the author's opinion that a minority board member must remain silent after a majority decision has been made on a policy. In most communities the newspaper reports of school board meetings solve this problem, even for the mildly opposed member who makes his point of view manifest at a regular board meeting.

The book closes with a rating scale for boards, which sets up 12 characteristics that spell success or failure of a board.

Study of School Districts Which Rejected Their 1959-1960 School Budgets

Research Division. 27 pp. Published by the State Education Department, Albany, N. Y.

This study indicates that of 1272 budgets voted on in New York State in 1959 only 34 were defeated on the first vote and seven were accepted on a contingent basis. The rejecting districts were primarily suburban residential areas. 24 were within 20 miles of an employing urban center, and 15 within the New York metropolitan area. The districts exceeded their suburban neighbors in the number of children enrolled and had an excessive increase in pupil cost relative to neighboring districts. Opposition came from organized economy minded home owners. Significantly, the boards of education had a much higher rate of turnover than the boards in communities which voted favorably. The school administrators attributed the difficulties to high costs, local altercations, organized opposition, difficulties in communication, alleged frills, and voter apathy.

Modern Techniques in Teaching Foreign Languages

Edited by Elliott H. Kone. 190 pp., \$2. Published by Educational Film Library Association, New York 19, N. Y.

This study prepared by the Connecticut Audio-Visual Education Association presents a series of papers on the fundamental problems of teaching foreign languages, and the arrangement and equipment of the foreign language laboratory. It also offers a series of papers on the courses developed in the reading of modern languages. It reprints in part outstanding papers on the problems of modern language teaching as found in not readily accessible professional literature. A bibliography and list of producers of modern language materials are included.

Zoning Primer

By Martin J. Rody and Herbert H. (Concluded on page 52)



18,600 sq. ft. 33/32" Edge-Grain Ironbound Floor in Women's Gym, Michigan State U., East Lansing, Mich. Arch.: Ralph E. Calder, Detroit, Gen'l Contr.: Granger Bros., Lansing. Installer: Bauer-Foster Floors, Inc., Detroit.

IRONBOUND* CONTINUOUS STRIP* HARD MAPLE FLOOR

For MSU coeds, physical education is an important part of college training. And the gymnasium floor used by hundreds of students every school day is an important part of the university's physical education facilities.

An edge-grain Ironbound Northern Hard Maple floor was a "must" for this important installation because of its smooth, natural beauty, uniform resiliency and long-run economy.

Ironbound's uniform resiliency, assured by layers of mastic and cork under the flooring, prevents sore ankles and leg muscles. And its exclusive sawtooth steel splines interlock the durable maple strips to keep the floor tight and resistant to wear, long lasting and economical.

For full information on Ironbound for schools, industrial plants and public buildings, write to Robbins Flooring Company, Reed City, Michigan, Attention: Dept. AJ-1060.

ROBBINS FLOORING COMPANY

Reed City and Ishpeming, Michigan

Manufacturers of Ironbound* Continuous Strip* Maple Flooring,
PermaCushion* Resilient Floors and other hardwood flooring



This mark tells you
a product is made of
modern, dependable Steel.



Who bungled the Colosseum's seating plan ?

History tells us that the Colosseum was large enough to hold 100,000 spectators. Yet, there were only 87,000 seats. This meant standing room only for 13,000 foot-weary Romans. To make matters worse, the Colosseum was built too solid for expansion. ☐ Somebody fumbled the ball back in A.D. 80, but history can repeat itself. So, if you are planning to build a new stadium or to remodel your present one, be sure to look into USS AmBridge Standard Steel Grandstands—they're engineered to grow with your school. AmBridge Grandstands expand to any size quickly and economically. ☐ These rugged steel grandstands can be moved if necessary, and they adapt to ground contours without extensive grading. Incidentally, for facilities under the stands, our watertight steel plate decking makes a perfect roof for lockers, showers, classrooms, office space and concession booths. ☐ You'll find complete details in our 24-page booklet on AmBridge Standard Steel Stadiums. Write to our Pittsburgh Office for your free copy.

USS and AmBridge are registered trademarks

General Offices: 525 William Penn Place, Pittsburgh, Pa.

Contracting Offices in: AmBridge • Atlanta • Baltimore • Birmingham • Boston • Chicago • Cincinnati
Cleveland • Dallas • Denver • Detroit • Elmira • Gary • Harrisburg, Pa. • Houston • Los Angeles
Memphis • Minneapolis • New York • Orange, Texas • Philadelphia • Pittsburgh • Portland, Ore.
Roanoke • St. Louis • San Francisco • Trenton • United States Steel Export Company, New York

**American Bridge
Division of
United States Steel**



NEW *Streamlined* STYLING

MODERN in color

MODERN in design

TAYLORED for you



These newly designed face-mounted models and semi-recessed types now make the Halsey Taylor line most complete! This re-styling adds a distinct touch of streamlined beauty to time-proved functional utility and supplements contemporary architectural planning. Write for catalog or see Sweet's.

The Halsey W. Taylor Co., Warren, Ohio



Halsey Taylor

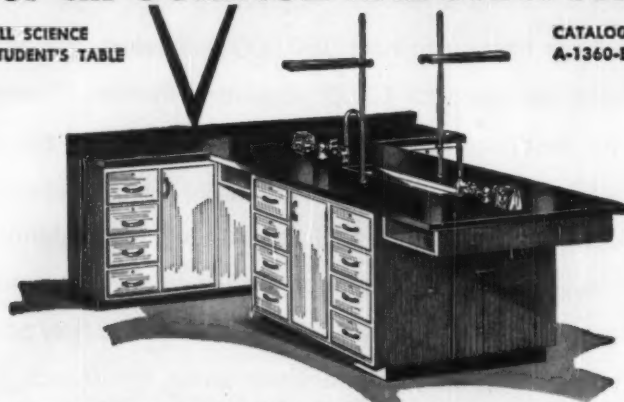
FOUNTAINS

ENGINEERED THE BEST TO
MEET EVERY SERVICE TEST

Quality / FURNITURE for all SCIENCE LABORATORIES

ALL SCIENCE
STUDENT'S TABLE

CATALOG NO.
A-1360-EC



These new perimeter type tables offer unlimited design possibilities and arrangements from standard interchangeable base units. They provide numerous advantages for new construction design as well as for use in remodeling for Chemistry, Physics, Biology and General Science laboratories. Our representative engineer will be pleased to discuss your requirements and show you the entire line of Peterson furniture that has been the choice of leading educators and industrial furniture users for more than 65 years.

Write Dept. 1224 for Brochure Number 12. It's FREE

LEONARD PETERSON & CO., INC.

1222 FULLERTON AVENUE, CHICAGO 14, ILLINOIS

NEW BOOKS

(Concluded from page 50)

Smith. Paper, 48 pp., \$1. Chandler-Davis Publishing Co., West Trenton, N. J.

This primer outlines basic principles and widely accepted practices on (1) effectiveness in zoning urban and suburban areas, (2) constitutional and legal aspects of zoning; (3) zoning and the master plan for an urban community, (4) rural zoning, (5) developing a zoning ordinance, (6) problems and trends in present-day zoning. School authorities, who too often take a back seat in zoning, should study this brief, trenchant statement.

Salary Schedule Maximums for School Administrators, 1959-60

Paper, 55 pp., 75 cents. National Education Association, Washington 6, D. C.

This report gives the maximum salaries for school administrators in urban districts with populations between 30,000 and 100,000. The data indicate that the median for supervisors with an M.A. degree is \$8,200, and \$8,425 for those with the highest level of preparation; \$8,605 to \$9,325 for consultants; \$12,650 to \$13,000 for assistant superintendents in both classifications. The maximum of staffs of individual schools ranges from \$8,736 to \$10,030 for administrators with an M.A. degree, and \$8,940 to \$10,375 for those with the highest level of preparation.

City Government Finances in 1959

Prepared by Robert W. Burgess. Paper, 10 pp., 10 cents. U. S. Bureau of the Census, Washington 25, D. C.

This is the financial report for municipal governments for the year 1959, including city revenue, expenditures, indebtedness, and financial holdings. The total revenue for 1959 amounted to \$13,748 million, or about 7 per cent more than the 1958 total of \$12,832 million. The amount spent for education reached \$11,093 million, or an increase of 6 per cent over 1958. Capital outlay for education amounted to \$266,000,000.

Characteristics of Administrative Handbooks for Staff Personnel

By John F. Staehle. Paper, 50 pp., 25 cents. Superintendent of Documents, Government Printing Office, Washington 25, D. C.

This is an analysis of the administrative handbooks developed by 72 medium and large-sized school systems in various regions of the country. The bulletin takes up (1) characteristics of handbooks, (2) school agencies and positions, (3) employment, (4) compensation and benefits, (5) employees' time and load, (6) personnel development, (7) instructional programs, facilities, and equipment, and (8) pupil personnel administration and services. The report stresses sound human relations in personnel administration.

Planning Schools for Use of Audio Visual Instructional Materials

Prepared by F. T. Mathewson, Paul T. Williams and Basil L. Hick. Paper, 28 pp. Division of School Buildings, New York State Education Department, Albany, N. Y.

This booklet will help school boards and administrators to plan new school buildings. It takes up (1) planning of classrooms for audiovisual materials, (2) providing for nonprojected visuals, (3) providing functional storage, (4) planning use of audio-visual materials in special rooms, (5) providing equipment in foreign language rooms.

THE REAL TRUTH about Floor Care Savings:

There is no economy in buying "cheap" products!

WHAT DOES THIS MEAN TO YOU?

Take waxing. Let's suppose you are considering two waxes, Wax "A" and Hillyard SUPER HIL-BRITE®.

WAX "A" costs less per gallon, but you must strip and re wax far too often.

With SUPER HIL-BRITE you can eliminate 4 re-waxings out of 6—and still have "new floor" condition, "new floor" beauty.

Approved by Flooring Manufacturers. Classified as slip resistant by U/L.

Sure, you can save money—until you start using them!

Says the latest Building Experience Exchange Report.* "It costs 49.8¢ a year to maintain a square foot of floor space. Of this 49.8¢, only 2.3¢ goes for materials.

*National Association of Building Owners and Managers.



*A Few Pennies Now
Will Save
Many Dollars Later*



Send Coupon Today for This Study

Here are authentic, documented case histories of floor maintenance savings. They'll help you pin-point ways to save labor and money on your floors.

You'll Be Money Ahead with

**The Hillyard
"Maintaineer"**

Is your own expert adviser.
on all floor care problems.

"On Your Staff, Not Your Payroll"

HILLYARD
Passaic N.J. ST. JOSEPH, MO. San Jose, Calif.



HILLYARD

HILLYARD St. Joseph, Mo. Dept. E-1

☐

Please send me Free
copy of "A Study of
Economies".

☐

Please have the Hillyard Maintaineer
survey my floors to recommend ways I
can get real maintenance economies.

NAME _____

FIRM OR INSTITUTION _____

ADDRESS _____

CITY _____

STATE _____

For that Floor
You Really WANT

DIAMOND
HARD

NORTHERN MAPLE



Woodworking Shop, Sr. High School,
Oneida, N. Y.—Arch., King & King—Installer,
Floor Contracting Co., Inc., Syracuse, N. Y.

Don't Just "Wish"

Take Woodworking shops — 30% of the school districts covered in a recent impartial survey report they have at least one Woodworking shop floored only with bare Concrete. Of these, over half said they "prefer" Hardwood Strip, but —

Don't be defeatist! Accent the positive! More than 60% of the district school shop superintendents reporting say they actually have Strip or Block floors.

Point Out Savings

Superior resilience, dent resistance, shock and vibration absorption are what make Wells DIAMOND HARD Northern Maple "right" for most shop areas. In these qualities, 2nd and 3rd grades are identical with the clear-grained 1st grade prized for ballroom floors — and cost 10% to 50% less!

Cite Facts

Use this data from school shopmen coast-to-coast reporting kind of floor they now have — kind they prefer — with percentage for each (Hardwood, Concrete, Tile, etc.) and for each of 8 major shop areas (Woodworking, Printing, Elec., etc.) —

WRITE

J. W. WELLS
LUMBER COMPANY

Menominee 5, Michigan

PERSONAL NEWS

CALIFORNIA

Arthur E. Gardner has been elected president of the Los Angeles board of education.

GEORGIA

Miss Ira Jarrell, formerly superintendent of schools at Atlanta, has been appointed state curriculum director for the schools.

John W. Leston has been elected to the Atlanta superintendent position.

KENTUCKY

Samuel V. Noe has been elected superintendent in Louisville, to succeed the late Omer Carmichael. He will receive an annual salary of \$12,000.

MICHIGAN

Dr. John E. Ivey, Jr., chief executive of the Midwest Program on Airborne Television Instruction, has been appointed consultant to the president and professor of education and sociology at Michigan State University. He will make his headquarters at East Lansing.

MINNESOTA

Arnett W. Leslie has been elected president of the Minneapolis board.

Dean M. Schweickhard, State Commissioner for Vocational Education, has announced his retirement at the end of his six-year term July 31, 1961. Speaking before the State Board of Education on August 1, he told the board that vocational education in the state has tripled in the last twenty years. The number of pupils enrolled has increased from 35,000 to 92,000. Mr. Schweickhard has been commissioner since 1943. His salary is \$12,750, which many believe is too low for a post of this character.

NEW YORK

The dismissal of Supt. Herbert B. Smith, of Peekskill, has been upset by the State Education Commissioner James E. Allen. The suspension was ordered before the board had filed charges against Dr. Smith. Dr. Allen ruled that a superintendent could not be dismissed during the term of his contract, except after a hearing on specific charges and an affirmative vote of a majority of the board. Mr. Benjamin Hersh, lawyer for the board, said that the board's course now would be to reinstate Dr. Smith, suspend him again, and try him on the charges made.

TEXAS

Mrs. Bertie Maughmer, since 1956 a member of the Houston board, has been placed under arrest on a charge of assault to murder her policeman husband, Lieut. Earl Maughmer, Jr. Mrs. Maughmer has been in the center of numerous conflicts in the board of education where she has taken the extreme of conservative positions and has helped to ban textbooks and defeat the school lunch program, and other forward-looking measures. Parents of children enrolled in the Houston schools have signed petitions requesting Mrs. Maughmer's resignation.

W. P. Herring, formerly business manager and purchasing agent for the Highland Park school district in Dallas County, has retired after 33 years' service. Dennis S. Davis, who succeeds him, will hold the new post of director of business services and property management.

PRANG®

is to color
what the apple
is to teacher...



Just as the apple is a symbol of friendship between student and teacher, the name Prang has long represented the ultimate in quality, dependability and new developments in school art materials. Prang products are enthusiastically recommended by outstanding administrators, art instructors and authorities in school buying everywhere. They know the "PRANG SIGNATURE" helps assure exciting enthusiasm and true creative heights for their art programs.



Make sure to specify these Prang products:

- PRANG CRAYONEX CRAYONS
- PRANG WATER COLORS
- PRANG TEMPERA COLORS
- PRANG SKETCHO
- PRANG PAYONS
- PRANG DEK-ALL COLORS
- PRANG TEXTILE COLORS
- PRANG COLORED CHALKS



**THE AMERICAN
CRAYON COMPANY**
SANDUSKY, OHIO NEW YORK

THE SCHOOL SCENE

(Concluded from page 10)

Junior High students will take courses at Schenley.

Six experimental courses, designed during the past year, will be taught at Schenley in biology, English, French, geometry, and social science. The classes will take in 121 of Schenley's 1400 students in groups of not more than 25. They will be chosen for ability, interest, past performance, and teacher recommendation.

The program is also arranged for students headed for college. Fifteen Schenley students will take one class a day at Pittsburgh in anthropology, the humanities, economics, English, mathematics, political science, psychology, and Spanish. Fifteen students from all over the county will start as full fledged freshmen at Pittsburgh this year before they have completed their high school requirements.

It is believed that bright high school students can plan their work to have an easy year in their senior year. There shouldn't be any letdown year at that age. The important thing is to accustom bright students to work at the peak of their ability, so that their work habits become habitual.

The demonstration is now planned as an eight to ten-year program. Major financing so far includes \$125,000 from the Ford foundation, and \$40,000 from the Buhl Foundation.

ELEVEN-MONTH SCHOOL EXPERIMENT

The public schools of Mineola, L.I., N. Y., are, beginning in September, 1960, putting into effect the final stage of a controlled experiment to determine whether a group of pupils, intellectually, physically, and socially able, can successfully be accelerated one school year by the use of an 11-month school year for each of four years.

An experimental group will be completing the third year and fourth summer of an eleventh-month school-year program. These children, who have completed grade four, are being carefully tested in various measures of accomplishment to ascertain whether or not grouping, acceleration, and extension of the school year as carried out are desirable.

Careful records are being maintained for three control groups: (1) a group matched pupil for pupil in as many ways as have been possible to measure; (2) a heterogeneous group of similar age; and (3) a group matched with the experimental group, except that the pupils chosen are one year older chronologically and educationally at the beginning of the experiment.

MERIT SALARY SCHEDULE

The Madison, N. Y., board of education has approved a new salary schedule covering steps 11 through 16. A teacher may proceed from step 10 to step 11 by fulfilling two requirements: The teacher must successfully complete the prescribed credit hours of work or their equivalent, which includes six hours for BA-minus, six hours for BA, three hours for MA, and three hours for MA-plus. This includes also courses or workshops, and travel; satisfactory recommendation by the supervising principal and elementary supervisor or assistant principal.

A teacher may proceed from step 11 to step 12, or from step 12 to step 13 only on the satisfactory recommendation of the supervising principal and the elementary supervisor or assistant principal.

A teacher may proceed from step 12 to



Richland Township School, Allegheny County, Pa., constructed with Rilco laminated wood beams and columns up to 44' in length. Architect: Altenhof and Brown, Pittsburgh, Pa.



RILCO

Laminated Wood Gives School Extra Beauty Plus Low Cost Bonus

In addition to the warm natural beauty of laminated wood beams, the new Richland Township School, Allegheny County, Pa., received a bonus—it was constructed for the 4th lowest per pupil cost of all elementary school buildings during that year.

An important factor contributing to this economy was the Rilco laminated wood structural members used—the initial cost was low, erection by regular work crews fast and easy . . . and upkeep expenses are minimum. Add to this economy the special warmth and beauty of Rilco wood that makes youngsters and instructors alike feel at home.

All good reasons why each year more and more school buildings are constructed with Rilco laminated wood. Rilco service engineers will be happy to consult with you and your architect, without obligation.

Write for free school construction catalog.



RILCO

works wonders with wood

RILCO LAMINATED PRODUCTS
W852 First National Bank Building
St. Paul 1, Minnesota

DISTRICT OFFICES: Tacoma, Wash. • Fort Wayne, Ind. • Linden, N. J.

step 14 by fulfilling certain requirements: (1) the satisfactory completion of the credit hours of work or other equivalent, which includes three hours, all of which must be earned since proceeding to step 11; (2) a satisfactory recommendation by the supervising principal and the elementary supervisor or assistant principal.

A teacher may proceed from step 14 to step 15 or step 15 to step 16 only on the satisfactory recommendation of the supervising principal and the elementary supervisor.

The salary schedule which is arranged in three sections sets up salaries for the bachelor degree, the master degree or 30 hours, and beyond the master degree or 30 hours. It starts with a minimum salary of \$4,200 and goes to a maximum of \$7,100 in the sixteenth step.

SCHOOL BOND SALES

During the month of June school bond

sales in the amount of \$237,653,200 were reported. The largest sales were: California, \$45,342,500; Louisiana, \$11,429,000; New York, \$26,586,000; Pennsylvania, \$50,553,000; Washington, \$11,714,000. The average yield during the week ended August 12 as reported in the Bond Buyer was 3.35 per cent. This represents a considerable reduction as against August, 1959 when the yield was 3.57 per cent.

TEACHER ASSISTANT PROGRAM

Miami University at Oxford, Ohio, has been granted a \$249,000 Ford Foundation grant for turning homemakers and other women into teachers' assistants in Cincinnati and Dayton.

With co-operation of the two school systems, Miami has set up a teacher-intern program. In two years, women college graduates will become certified for teaching, earning a master's degree in the process.

The first year includes classroom experience as teacher assistants, plus advanced study in designated subjects. In the second year, participants will pair up as paid interns in teaching teams in charge of classrooms. Dr. L. Warren Nelson has been named co-ordinator of the teacher-intern study program, which will begin in September of next year.

GLASS MENAGERIES COSTLY

New York City officials report that the city could build a new elementary school every four years with the money spent to repair damages caused by vandalism. Half a million dollars a year is spent for this purpose, and four fifths of that for broken windows. In the first six months of the year, 600 windows were broken in Junior High School 71. The peak vandal year of 1953 required half a million dollars for windows alone. Preventive measures have included the formation of organizations and groups within and without the school circle, including both policemen and pupils. Wire-mesh window guards have been installed in several schools. The board of education has encouraged designers to plan for fewer and smaller windows that will not present such a provocative picture to the eyes of willing young vandals.

WINDOWLESS SCHOOL

The first windowless school in Colorado will be built soon at Kremmling. The plans drawn by architect Samuel Caudill call for a grade school with no windows, but with air conditioning and glare-free, shadow-free lighting. The school is to be soundproofed and have mechanical controls for temperature, humidity, air movement, and lighting. Seats cut diagonally across the room, unlike the conventional arrangement. School officials describe the building as stress free, with the result that the health of children and the quality of education are improved. They contend that windows are costly both to install and to maintain.

EMPLOYEE APPRENTICESHIPS

An apprentice program to help school employees in crafts and skilled trades has been set up by the Los Angeles City school system to enable employees of the district to prepare for careers as mechanics and journeymen.

The Los Angeles City schools are training more than 3600 local apprentices in 57 trades representing 164 classes. The theory and related subject matter are taught in evening schools aside from the regular on-the-job training provided by employers.

ABSO GOLDEN ANNIVERSARY

The 46th Annual ASBO Meeting, at the Hotels Chase-Park Plaza, St. Louis, Mo., Oct. 8-13, will carry a theme of "Education, Economics, and Ethics in School Business." "The Professional Way is the Best Way" will be the theme of the Educational Exhibit. The meeting of the association, founded in 1910, will feature a Golden Anniversary Banquet Wednesday night, October 12.

Lawrence Derthick, Commissioner of Education, will deliver the keynote address during the association's First General Session, Monday, October 10. John Morley, recent winner of the "Speaker's Oscar" from the International Platform Association, will speak Tuesday morning. Committee meetings will commence Saturday evening, Oct. 8, and discussion meetings will be held Monday through Wednesday. School business officials, administrators, and board members are invited to attend.



MAXIMUM USE OF ALL AVAILABLE FLOOR SPACE!

A space saver for balcony installations...

• SAFE

EZ-A-WAY Forward Close-Delayed Action Gym Seats cannot overturn. Our new floor track design provides positive floor attachment in every position.

• CONVENIENT

EZ-A-WAY Forward Close-Delayed Action Gym Seats are easy to use... swinging rear riser board offers plenty of toe space for opening... gym seats can be locked in the open or closed positions.

• MODERN

EZ-A-WAY Forward Close-Delayed Action Gym Seats offer maximum utilization of available space. When closed they form a wall to separate a balcony into a modern room - for gym classes, dances and any other school activities.



FEATURES...

- Furnished with and without rear seat.
- Rear riser board may be swung up for opening and closing bleacher... plenty of toe space for operator.
- Positive foolproof linkage to floor.
- Owner can have peace of mind that bleacher cannot be pushed over edge of balcony even under abuse.
- Floor attached bracket and track are under bleacher in both extended and closed position... completely out of sight.

Write for complete details and engineering data for your requirements.



BERLIN CHAPMAN CO.
BERLIN, WISCONSIN



Soft drinks: liquid asset in your plans for

Increasing Student Use of School Cafeterias

The problem of participation in school cafeterias is not solved by any *one* ingredient. It takes a total program. But we respectfully suggest that one element in that program might well be bottled carbonated beverages.

Many administrators have found that when familiar soft drinks are available within school limits, youngsters are encouraged to stay on school property at lunchtime, and to use school facilities. There are several reasons:

Soft drinks (like relishes) accent the diet healthfully *and* visually, thus adding flavor and variety, zest and palatability to menus that may sometimes seem routine. In addition, soft drinks stimulate appetite and aid digestion.

WHOLESOME? Let's look. As you know, the body loses 2½ quarts of fluid each day. Bottled carbonated beverages help restore body fluid balance. They provide 100 calories of food energy per 8 ounces in easily assimilable form—a sound

contribution to pupil alertness in the classroom. And because they are in liquid form, soft drinks pass quickly through the mouth, with virtually no involvement in oral conditions related to dental problems. (Recent dental research confirms this thinking.)

From an efficiency point-of-view, bottled carbonated beverages are easy to store, handle and serve economically. Their availability causes no conflict with the national school lunch program.

If the subject of soft drinks in schools comes before your Board, talk it over with your local bottler. He's a tax-paying businessman of the community, dealing in products which contribute to the local economy in the same way as other food products served on school premises. All he asks is an equitable hearing.

Let us send you more complete and thoroughly documented literature on the food, health and social values of bottled soft drinks.



American Bottlers of Carbonated Beverages

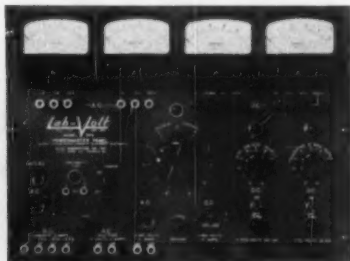
Washington 6, D. C.

National Association of the Bottled Soft Drink Industry—a non-profit association of manufacturers of bottled soft drinks, with members in every state. Its purpose: to promote better understanding of the industry and its products, and to improve production and distribution methods through education and research.

NEWS of PRODUCTS for the Schools

ELECTRICAL POWER UNIT

The Lab-Volt Powermaster Panel, model 204, supplies complete electrical power for the demonstration facilities needed in a secondary science or industrial arts course. Input required for the unit is a standard 115 volt a.c. outlet available in every school. The unit comes complete with necessary mounting hardware and test leads. It is available in panel form for standard rack mounting or cabinet for table and desk top use. All variable services have individual on-off switches and a master switch provides over-all on-off control. All circuits are protected by fuses accessi-



Full Power for Science Lab

SUBJECT: ROOM DARKENING

If your budget won't permit darkening of all classrooms for proper motion picture showing, we have the only answer in the simple, practical, and economical WILSON MOVIE-MOVER "RP." Easy-rolling, easy-to-use—brings educational films to the classroom without fuss.

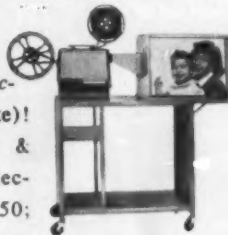
Uses your present projector (any make)! For Bell & Howell projectors, \$139.50; most others, \$159.50. Write

now for literature & full details.

H. Wilson Company

106-D Wilson Street
Park Forest, Ill.

Complete line of sensibly-priced, high-quality projector tables

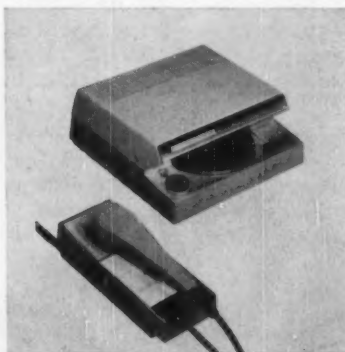


ble from the panel front, and all receptacles are clearly and permanently identified with voltage and amperage ratings. Send for full details from Buck Engineering Co., Inc., Freehold, N. J.

(For Further Details Circle Index Code 0155)

COMPACT DICTATION UNIT

A compact dictation control center, the "Satellite" microphone unit, eliminates the need of a dictating machine on the desk. The unit is the hub of the new Communicator line by The SoundScriber Corp., North Haven, Conn. A pushbutton on the microphone and three keys on the cradle



Remote Control Microphone

enable the speaker to dictate and scan back without handling the recorder, discs, or indexing. The unit features a "Magic Memory" circuit which assures accurate playback of previously dictated material. Up to five Satellites can operate remotely from the same recorder. Write for complete information about this new line.

(For Further Details Circle Index Code 0156)

TABLET-ARM FOLDING CHAIR

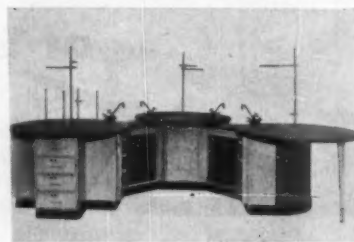
A new "swing away" tablet-arm folding chair has been announced by the Hampden Specialty Products Corp., Easthampton, Mass. A folding tablet arm, of solid $\frac{3}{4}$ in. birch-grained pattern plastic, swings flat against the side of the chair when not in use, and automatically safe-locks into place when in use. Model 303 folds flat for easy storage. Constructed of sturdy, tubular steel with heavy duty braces and hinges, and rubber-tipped feet, the chair comes in four colors: beige, gray, terra cotta, and turquoise.

(For Further Details Circle Index Code 0157)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

"SCIENCE CIRCLE"

The John E. Sjöström Co., Philadelphia, 3, Pa., exhibited its award-winning "Science Circle" laboratory furniture at the German Industry Exhibition in September. Breaking with traditional austere design,



Accommodates 8 to 12

the furniture features colorful circular work surfaces in modern plastic finishes on a variety of natural white oak bases, interconnected by stainless steel sinks. Each unit is custom-assembled to serve eight or 12 students with hot and cold water faucets, gas cocks, and electrical outlets. Instructors' desks come in the same design as these space-saving student tables.

(For Further Details Circle Index Code 0158)

MOBILE DEMONSTRATOR

A small classroom can become a science laboratory or projection room without special plumbing or electrical work by using the new Model DK2 mobile demonstrator by Desks of America, Inc., Bridgeport, Conn. This all-purpose, movable unit may be used for storing display materials, as a visual projection unit, or be equipped



Teaching and Storage Unit

for science classes. It has plenty of storage space and comes with three removable demonstration panels that can be set up before class to save time. For visual aid use, a translucent screen may be elevated. By means of an ingenious arrangement of mirrors and prisms, any projector mounted inside the cabinet can be used for rear projection. An interior mounted loud speaker can be ordered for use with a tape recorder. Send for details on demonstrator and its accessories.

(For Further Details Circle Index Code 0159)

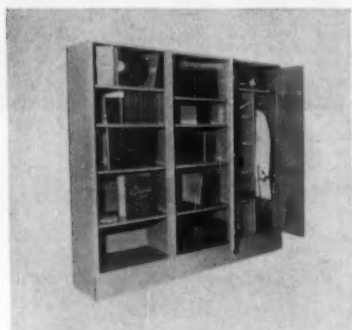
ELECTRIC PROJECTION SCREEN

The "Autoelectric" is a new small size, electric projection screen made by Radiant Mfg. Co., Chicago 80, Ill. The wall screen comes in standard sizes of 50, 60, or 70 sq. in., in a hammerloid blue aluminum case complete with mounting brackets. Operated from any standard electric outlet, the screen may be raised and lowered automatically at the touch of a switch. It can be concealed behind a cornice or recessed in a ceiling. A built-in stop mechanism halts the screen at any point. A removable toggle switch prevents tampering. The surface is white glass beaded Vyna-Flect, fungus and flame resistant. Send for price information.

(For Further Details Circle Index Code 0160)

BOOKCASE AND WARDROBE

A combination steel bookcase and wardrobe locker for teachers is offered by the Penco division of Alan Wood Steel Co., Oaks, Pa. The double door locker contains



Teacher's Cabinets

book shelves and two coat hooks. Its construction features a fixed door handle, sturdy door frame and hinges, and a louvered door. The locker measures 66 in. high (including a 6 in. closed base), 22 in. wide, by 15 in. deep. Optional features are a sloping top that prevents dust and litter accumulation and an Auto-Lock that operates with a key. The unit is available in standard colors of gray, green or tan, or in special decorator colors.

(For Further Details Circle Index Code 0161)

TRIPLE HORIZONTAL BARS

Ideal for playground use are the All-American triple horizontal bars. These regulation, connected bars have uprights, five, six and eight feet high, fabricated from $2\frac{3}{8}$ in. galvanized steel pipe. Units are anchored in a concrete base, three feet deep. The horizontal bars, each five feet long, are of $1\frac{1}{4}$ in. cold-rolled steel, securely attached to the uprights. Produced by the American Playground Device Co., Anderson, Ind., the bars weigh 300 lbs.

(For Further Details Circle Index Code 0162)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

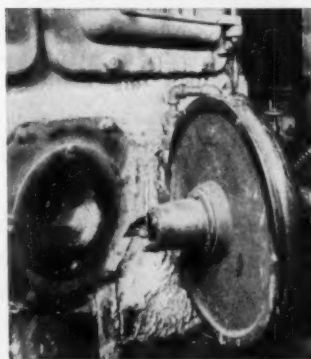


*we're doing fine
now on #6 oil..
with help from
ACME CHEMICAL*

We almost gave it up—but using #6 oil to heat our buildings meant such big savings for us that we didn't want to consider a costlier grade.

Yet we had to do *something*. Too many days we opened school in cold buildings or had to shut down early because sludge clogged the nozzle and caused the burner to fail.

Then we heard about Thermo-Kleen®. Thermo-Kleen is Acme Chemical's four-way fuel oil conditioner. We found



that it just about puts an end to oil burner failure due to sludge, water, rust or soot. It dissolves sludge so that it can be burned away. It makes a burnable emulsion of water droplets present in the oil. It prevents soot-scale from forming on fireside metal and boiler tubes. It protects tank and boiler metal against rust. Best of all, it lets us go right on using economical #6 oil!

Thermo-Kleen, one of 80 fine products made by the Acme Chemical Company, costs under 1/10 of a cent per gallon of fuel burned. Effective with any grade oil, #1 to #6. Ask your Acme Man—or write for details.



Maintenance materials for the School Building...

served to your satisfaction

Paul Anderson, U.S. Olympic
Heavyweight Champion



world's
champion
weight lifter
breaks record
standing on the
world's strongest

all-steel
folding
chair



Strength: electrically welded tubular steel. **Comfort:** contoured seats and backrests. **Easy Folding:** legs glide open. **Safety:** hinges can't pinch fingers. **Style:** your choice of 11 new colors in snag-free, chip and rust-resistant baked enamel.

now at a new low price

Samsonite

folding chairs



For church, school, club, other group seating information, see Yellow Pages or write: Shwayder Bros., Institutional Seating Div., Dept. 58-100, Detroit 29, Mich.

THREE-IN-ONE-FIXTURE

The Lumi-Flo troffer, offered by Thomas Industries, Inc., Benjamin Division, Louisville, Ky., provides fluorescent light, cool air, and warm air from the same concealed ceiling fixture. Doing away with unsightly separate outlets for air conditioning, heating and lighting, Lumi-Flo is

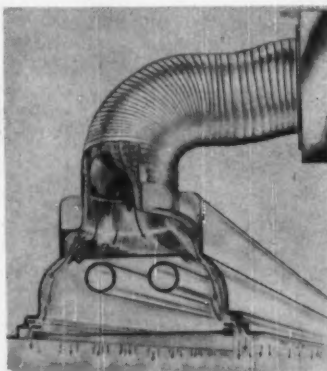


Diagram of Vented Light

adaptable to almost any type of building, old or new, with any type of drop ceiling. The units are connected with the air duct system through a special snap-in collar, supplied by the sheet metal contractor. The fixtures, 12 and 24 in. wide, are made in two and four ft. lengths or eight ft. tandems. Write for Bulletin B, a 44-page catalog containing cutaways, exploded views, technical data and drawings.

(For Further Details Circle Index Code 0163)

FOLDING LUNCH TABLE

A roll-away lunch table with unit-frame construction has been introduced by the Smith System Mfg. Co., Minneapolis, Minn. A solid Uniframe welded frame locks automatically to prevent surprise closings and table tipping. The design permits easy access to benches, because there are no braces or projections to interfere with seating. The metal frame, plated with zinc lustron, will last for years with-



Sturdy Welded Frame

out chipping, rusting, or peeling, according to the manufacturer. Mounted on four-inch rubber-tire casters, the table opens and closes in a single smooth motion. It folds to 4½ ft. by 1½ ft. Send for bulletin No. 801.

(For Further Details Circle Index Code 0164)

CORRESPONDING CODE INDEX NUMBERS
TO BE ENCIRCLED CAN BE FOUND ON THE
CARDS IN THE READER'S SERVICE SECTION

WAYNE



WAYNE INDOOR SEATING SYSTEMS

work wonders on
any school budget



Hard-working Wayne Model 30 folding bleacher. Economy seating in the folding bleacher class.



Leader in luxury seating at a popular price. Wayne Model 80 Rolling Gymstand.



Deluxe Model 70 continuous rolling gymstand. Finest money can buy!



Only Wayne offers three basic types! More value, better engineering, finer performance in each . . . from the world's largest manufacturer of spectator seating. Write for big, all new 1960 catalog today.

WAYNE IRON WORKS • WAYNE, PA.

FOR SUPERIOR DESIGN, CONSTRUCTION
AND PERFORMANCE... FAR GREATER
STRENGTH... UNEQUALLED SAFETY...

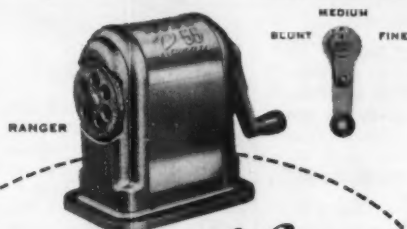


AMERICAN *Approved* PLAYGROUND SWIMMING POOL and DRESSING ROOM EQUIPMENT

Since 1911 the finest equipment built,
backed by lifetime guarantee against
defective materials and construction
... specified by leading recreational
authorities for almost half a century.

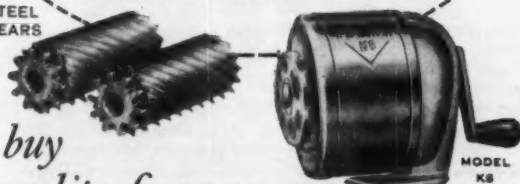
Send for New Catalog

Write for Folder
On AMERICAN'S
JIM PATTERSON
LIFETIME
Aluminum
DIVING
BOARD
WORLD'S FINEST
OFFICIAL BOARD



specify
BOSTON[®]
PENCIL SHARPENERS

STEEL
GEARS



*buy
quality for economy*

Engineered to meet today's high
standards for schools... Rugged and
durable... These Boston Sharpeners
will give you more service for
less maintenance than ever before.

Write for information
and prices to Dept. F

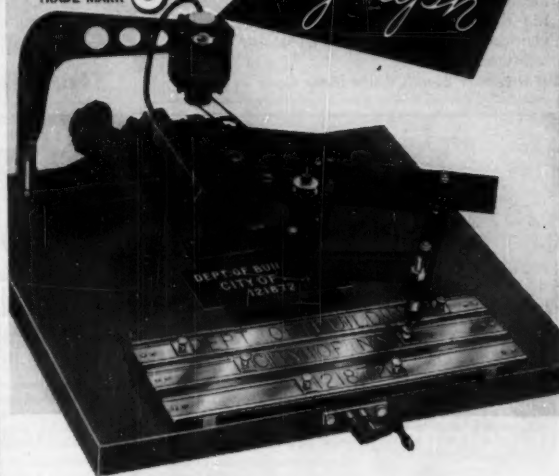
C. HOWARD HUNT PEN CO., CAMDEN 1, NEW JERSEY



The One Machine for 1001 School jobs

Engravo graph

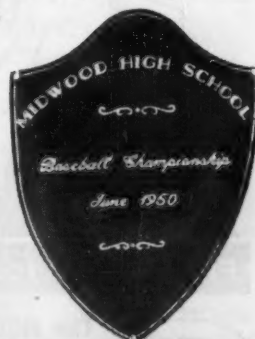
TRADE MARK



SERVES THE SCHOOL — ENGRAVOGRAPH makes the thousand
and one signs, nameplates, and badges needed around the
school — in minutes! It marks school property to prevent loss
or theft, also engraves medals and trophies for teams, clubs,
scholastic achievement.

SERVES THE STUDENTS — ENGRAVOGRAPH works on the tracer-
guided principle; any student can produce beautiful precision
work easily after a few hours training. There are over 20,000
machines now in use in industry, retail stores, institutions...
a good job opportunity for students.

PAYS FOR ITSELF — As a maintenance item alone ENGRAVO-
GRAPH pays for itself in eliminating the signs you buy on the
outside. And you can make everything as you need it, with no
delays, no purchasing problems.



**SEND FOR
CATALOGUE E-10**

new hermes

ENGRAVING MACHINE CORP., 154 W. 14th ST., NEW YORK 11, N. Y.
IN CANADA, 359 St. James Street West, Montreal, P. Q.

COMBINATION SINK

A combination round drinking fountain and deep rectangular sink bowl is offered by the Elkay Mfg. Co., Chicago 1, Ill. The newly patented unit is designed particularly for schoolroom use where codes require separate sink and bubbler units. The over-all size of the stainless steel unit is 34 by 16 in., with a 7½ in. deep rectangular bowl and a fountain bowl, 3½ in. deep by 12 in. diameter. Models offer the drinking bowl placed either to the right or left of the sink. Three faucet holes are located on the outer edge farthest from the drinking fountain. A faucet or conventional bubbler is available for the fountain.

(For Further Details Circle Index Code 0165)

MILK DISPENSER

A new model, UC-2, from Meterflo Dispensers, Niles, Mich., efficiently dispenses controlled portions of milk and other bev-



Serves Two Beverages

erages. The entire unit rolls beneath a standard counter, and can be easily moved on casters for cleaning and servicing. It holds two standard 5 gallon dairy cans, which can be placed in the refrigerated cabinet without lifting. The cabinet can also dispense two beverages. Pushing a button at counter height serves a portion; drink counters indicate the number of servings from each can; quantity of portion can be set. The unit meets code equipments for dispensing equipment. A coin-operated model is available.

(For Further Details Circle Index Code 0166)

No. K-3 TABLE
TEMPERED MASONITE
PLASTICIZED TOP

UP TO 40% DISCOUNT
TO CHURCHES AND
OTHER INSTITUTIONS

Monroe
FOLD-KING
FOLDING BANQUET
TABLE LINE

FREE-1961 CATALOG AND DIRECT-TO-INSTITUTIONS PRICES
Kitchen committees, social groups, attention! Direct-from-factory prices — discounts up to 40% — terms. Churches, Schools, Clubs, Lodges and all organizations. Our new MONROE 1961 FOLD-KING FOLDING BANQUET TABLES are unmatched for quality, durability, convenience, handsome appearance. NEW—completely automatic lock on pedestals and legs, "snap" them rigidly in place. New pedestal and frame construction. 68 models and sizes.

Ask for our beautiful new catalog with color pictures of Folding Tables, Folding Chairs, Table and Chair Trucks, Portable Partitions, Bulletin Boards, Folding Risers and Platforms. Send for:

Monroe
CATALOG
in COLORS

40 PAGES • COLOR
PICTURES • PRICES
DISCOUNTS

THE MONROE COMPANY

6 Church St. **COLFAX, IOWA**



FREE TELKEE booklet answers that question for you; shows how TELKEE saves you time and money, gives you new convenience.

STOPS time wasted locating lost or borrowed keys

MINIMIZES expensive lock replacement and repairs

ORGANIZES all your keys in one orderly system

What's more, TELKEE guarantees maximum security and privacy—keeps keys in authorized hands, always.

Offices, factories, stores, schools, housing, hospitals . . . there's a TELKEE System to fit every size and type of application. TELKEE solves every key problem, efficiently, inexpensively.

FREE—send today!



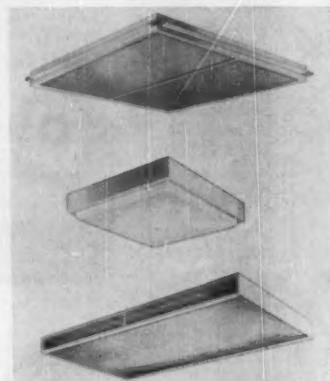
The MOORE
KEY CONTROL®
System

P. O. Moore, Inc., Glen Riddle, Pa.
Send **FREE TELKEE** booklet

NAME _____
FIRM _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

MODULE LIGHTING FIXTURES

Choose a side, a bottom, and a module from the new line of Slimlux Surface Modules by Edwin F. Guth Co., St. Louis 3, Mo. The choice offers versatility and



Extra-Slim Designs

variety for on-ceiling lighting. Four side designs and several bottom enclosures are offered to fit eight standard size module units. The heavy gauge steel units have a baked on white enamel finish. Slimfin models are also furnished in bronze and silvan finishes. All units are listed by Underwriters' Laboratories, Inc. Send for complete information and specification sheets.

(For Further Details Circle Index Code 0167)

NEW FILMS

A new full-color sound movie on electric comfort heating for schools is available on loan from the Edwin L. Wiegand Co., Pittsburgh 8, Pa.

(For Further Details Circle Index Code 0168)

"Listen, Speak, Learn," an 11-minute 16mm. color film, describing the use of electronic language laboratories, is available from the Rheem Califone Corp., Hollywood, Calif. All scenes were filmed in actual high school language laboratories. Send for complete details.

(For Further Details Circle Index Code 0169)

CARDS IN THE READER'S SERVICE SECTION
CORRESPONDING CODE INDEX NUMBERS
TO BE ENCIRCLED CAN BE FOUND ON THE

Torjesen

"WALL-A-WAY" FOLDING PARTITIONS

ELECTRICAL OR MANUAL OPERATION
TO DIVIDE GYMNASIUMS, AUDITORIUMS
CLASSROOMS, OFFICES, ETC.

NOW—for the same price as duck,
you can have a Vinyl or "Toroply"
covered partition that cuts maintenance costs 75% to 80%.

Send for detailed catalog with list
of local representatives

TORJESEN, INC.

209-25th St., Brooklyn 32, N. Y.
Telephone: SOuth 8-1020



Fixed columns
+
adjustable
shelves

Adjustable Height
WALL MOUNTS



Schooline®
WARDROBE SYSTEMS

Solve the pupil wraps problem efficiently with Wallmount Coat and Hat Racks. Mount on any available wall space. Hat shelves and hanger bar adjustable on permanently attached columns to height for any age group. Double hat shelves and double row of spaced coat hooks accommodate 6 pupils per running foot. Basic 3' 2" or 4' 2" units interlock to make continuous racks to fit any space or capacity requirements.

OVERSHOE RACKS



Matching units for
Wallmount. Keep over-
shoes off-the-floor in an
orderly manner.

Write for "Schooline" Catalog SL-206

VOGEL-PETERSON CO.
RT 33 & MADISON • ELMHURST, ILLINOIS

BOARD MEETINGS

(Concluded from page 16)

schools. The superintendent in turn can list the topics received for presentation to the board at its first meeting in September for determination of priority and the number that can realistically be dealt with during the year. Usually it will be possible to include them all, but the opportunity exists for tailoring the total to fit the year's meetings. Then the superintendent can space budget items and the broad topics in an overall "Agenda for the Year" for adoption at the following meeting, leaving some time, of course, in each meeting for the routine matters which invariably arise. With the year's work before the entire board, assignments can be made for the responsibility of making the presentations, either by the school administration, or possibly a sub-committee, or an individual member.

The physical preparation of weekly agendas is left in the hands of the superintendent, who includes any items suggested by board members. He then sends a copy, together with pertinent background information and the minutes of the previous meeting, to each member two days prior to the meeting. This can be considered a homework assignment. Experience will quickly demonstrate that more is accomplished when the members of a governing body—a board of education—know exactly why they are assembled and have thought about courses of action.

Hopefully this review has illustrated how the leadership role of boards of education can be implemented by organizing and planning significant meetings aimed at the final adoption of strategic policies.

It is entirely unrealistic to assume that innovations can be brought into being without a modicum of friction and inertia. Progress in all institutional forms must overcome the reluctance to change per se, even when the alternative amounts to pathological stagnation. Neither the constitution, nor any of the legislation passed since, was adopted without dissent because, contrary to what advertising men contend, thinking men do not all think alike. There is, therefore, no reason to expect that a new policy proposed will have the unanimous support of the teaching staff, the administration, and every board member. Unanimity exists only in fairyland—so one must vote for higher quality education with conviction and serenity.



Same as knife, fork and spoon, Weber Costello Chalkboard, Chalk and Erasers go together. It is natural that as pioneers in the manufacture of chalkboards we should have perfected chalk that is so compatible with chalkboards and erasers that clean "cleaner", faster.

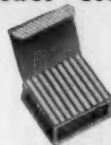
Weber Costello Chalkboard

A complete range of chalkboard types—each a leader in its class. Soundly engineered writing surface that is "friendly" to chalk.

—erases more easily. Scientifically correct in color. Every square foot guaranteed. Stocked, sold and serviced by qualified, experienced distributors.



Weber Costello Chalk



Based on years of manufacture, research and field study. A blend of components designed to provide thorough coverage, fluent writing and easy, complete erasing. Extruded for firmness, less breakage, and cleaner handling. Alpha pure white, P/C Alpha-site polychromatic golden ivory and Omega in 8 erasable colors.

Double-Sewed Costello® Erasers

High quality, long fibre all felt erasers. Sections are bound to each other and to back by ten separate sewings—will outlast cheap erasers 3-to-1.



WRITE FOR SAMPLES
OF CHALK and LITER-
ATURE.

**Weber Costello
Company**
CHICAGO HEIGHTS,
ILLINOIS



Manufacturers of: CHALKBOARD, CHALK,
ERASERS, ART MATERIALS, MAPS, GLOBES

PREMIER

engraving
company



EXCELLENT PHOTO ENGRAVERS!

We'll back that up with a closely-knit organization pledged to produce your work with an enthusiasm that meets your close schedules . . . and done with an expert touch that brings you the finest photo engraving. To augment this service and quality, we have installed new powderless etching equipment. This is in keeping with our policy to produce a superior product for our clients, with the most efficient methods.

PREMIER ENGRAVING COMPANY PHOTO ENGRAVERS

818 West Winnebago Street - Milwaukee 5, Wisconsin
BRoadway 1-3337 | 3338 | 3339

CATALOGS AND BOOKLETS

New specifications for cleaners and floor polish for use on asphalt and vinyl asbestos tile floors have been issued by the **Asphalt and Vinyl Asbestos Tile Institute**, New York 17, N. Y. Send for a free copy.

(For Further Details Circle Index Code 0170)

Send for a brochure describing reinforced and precast "Concrete Grandstands and Steel Bleachers" from the **Monroe Seating Co.**, Monroe, Mich.

(For Further Details Circle Index Code 0171)

A new 48-page catalog describes the expanded line of stock science furniture by **Kewaunee Technical Furniture Co.**, Statesville, N. C. Eleven science room floor plan layouts are shown, plus complete roughing-in information on all items.

(For Further Details Circle Index Code 0172)

The new "Skyco" products catalog describes how "Fence-Bond" paint, applied directly on rust, stops rust action and provides complete one-coat protection of chain-link fence. A copy is available from **The Skybryte Co.**, Cleveland 14, Ohio.

(For Further Details Circle Index Code 0173)

Write to the **Universal Bleacher Co.**, Champaign, Ill., for a free copy of a 6-page, two-color brochure, "How to Play Your Outdoor Seating."

(For Further Details Circle Index Code 0174)

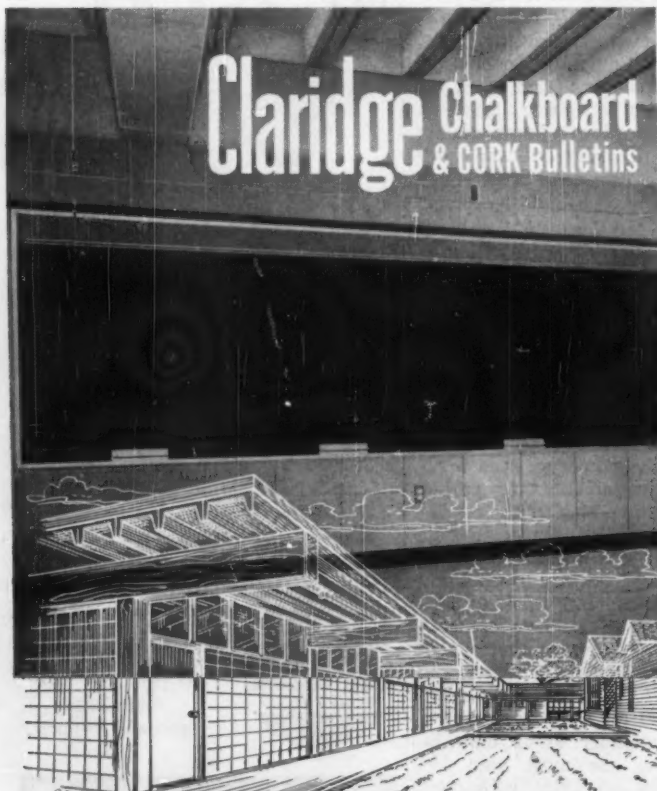
The **Aluminum Window Mfgs. Assn.**, New York 17, N. Y., announces the 1960 edition of "Aluminum Window Specifications." Send for a free copy.

(For Further Details Circle Index Code 0175)

Send for an architectural file describing the new **Stark Thrift-wall** construction system, available from **Stark Ceramics, Inc.**, Canton 1, Ohio. The precision system which utilizes standard structural glazed tile units with standard door and window frames can cut costs by as much as 35 per cent, according to the company.

(For Further Details Circle Index Code 0176)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION



Lewary High School, Donaldville, La.

Architects: LeBlanc & Deen, Baton Rouge, La.

QUALITY...PERMANENCY at LOW COST! Claridge continues to modernize and improve chalkboard and bulletin board manufacturing in step with new educational demands. 36 years experience concentrated on ONE purpose: the **FINEST** chalkboards and bulletin boards with greatest educational value. Schools and architects around the world name **CLARIDGE** to define their standard of quality.

NEW! Full Color Catalog

Larger, many real colors, more detail. Get Catalog 300 to help you solve replacement, remodeling, or new building problems. You'll find much helpful information.



Claridge PRODUCTS and Equipment Inc. HARRISON, ARKANSAS

☐ Please send catalog 300 ☐ Send samples or additional data on items circled below:

- | | |
|---|--|
| 1 Duracite Chalkboards in Seven Colors | 9 Claridge Factory Built Chalkboards and Bulletin Boards |
| 2 Grapholite Chalkboards | 10 Claridge Washable Chalkboards |
| 3 Asbestosite Chalkboards | 11 Vertical Sliding Chalkboards |
| 4 Horizontal Sliding Chalkboards | 12 Claridge Reversible Chalkboards and Bulletin Boards |
| 5 Vitracite Porcelain Enamel Chalkboards | 13 Extruded Aluminum Display and Trophy Cases |
| 6 Duralsteel Chalkboards in Seven Colors | 14 Extruded Aluminum Bulletin Board |
| 7 Fabricork Fabric Surface Bulletin Boards | 15 Claridge Swing Leaf Display Boards |
| 8 Extruded Aluminum Chalkboard and Corkboard Trim | |

Name _____

School _____

Address _____

City _____ Zone _____ State _____

READER'S SERVICE SECTION

INDEX TO SCHOOL EQUIPMENT

The index and digest of advertisements below will help you obtain free information, catalogs, and product literature from the advertisements and companies listed in the new products section. Merely encircle the code number assigned to each firm in the request form below, clip the form and mail it to THE AMERICAN SCHOOL BOARD JOURNAL. Your request will receive prompt attention.

Code No.	Page No.	Code No.	Page No.
100	Acme Chemical Co. 59	1015	Kohler Company 45
	Maintenance materials		Plumbing fixtures
101	American Bottlers of Carbonated Beverages 57	1016	Krueger Metal Products Co. 6
	Soft drink association		Fiberglass chairs
102	American Crayon Company 54	1017	Magnetic Recording Industries . . 46
	Crayons, water colors, chalk		Television in Teaching
103	American Playground Device Company 61	1018	Magnetic Recording Industries . . 47
	Playground, swimming pool & dressing room equipment		Vital Education Series
104	Berlin Chapman Company 56	1019	Minneapolis-Honeywell Regulator Company 4 & 5
	Close-delayed action gym seats		Thermostatic controls
105	Butler Manufacturing Company . . 13	1020	Monroe Co., The 62
	Metal buildings		Folding banquet table line
106	Claridge Products & Eq. Inc. . . . 64	1021	Monroe Co., The 62
	Chalkboards and bulletin boards		Key control system
107	Delta — Rockwell Power Tool Div. 2nd cover	1022	Nesbitt, Inc., John J. 48 & 49
	Industrial tools		Heating, ventilating and air conditioning
108	Encyclopedia Britannica Films, Inc. 41	1023	New Hermes Engraving Machine Corp. 61
	Films		Engravograph
109	Firestone Tire & Rubber Co. . . . 14	1024	Owens Illinois: Kimble Glass Co. Sub. 4th cover
	School bus tires		Tinlite curtain wall
1010	Goodyear Tire & Rubber Co. . . . 2	1025	Peterson & Co., Leonard 52
	School bus tires		Science laboratory furniture
1011	Hillyard Chemical Company 53	1026	Powers Regulator Co. 8 & 9
	Maintenance supplies		Pneumatic controls
1012	Hunt Pen Co., C. Howard 61	1027	Premier Engraving Company 64
	Pencil sharpeners		Engravers
1013	International Business Machines Corp. 7	1028	Rilco Laminated Products, Inc. . . . 55
	Electric typewriters		Laminated wood
1014	Johnson Service Company 1	1029	Robbins Flooring Co. 50
	Pneumatic controls		Maple flooring

USE THESE CARDS

These cards are provided for the convenience of THE AMERICAN SCHOOL BOARD JOURNAL readers in requesting information on products, services, booklets, and catalogs offered by the advertisers in this issue.

October, 1960

THE AMERICAN SCHOOL BOARD JOURNAL
400 North Broadway, Milwaukee 1, Wis.

Please ask the manufacturers, whose code numbers I have encircled, to send me the information, catalogs, or product literature offered in this issue.

ADVERTISING INDEX
100 103 104 109 1012 1015 1018 1021 1024 1027 1030 1033 1035 1037 1039 1041
101 104 107 1010 1013 1016 1019 1022 1025 1028 1031 1034 1036 1038 1040 1042
102 105 108 1011 1014 1017 1020 1023 1026 1029 1032

NEWS OF PRODUCTS FOR THE SCHOOLS
0155 0157 0159 0161 0163 0165 0167
0156 0158 0160 0162 0164 0166

CATALOGS & BOOKLETS
0170 0172 0174 0176
0171 0173 0175

Also information on _____

Name _____ School _____
Title _____ Zone _____ State _____
City _____
HAVE YOU SIGNED YOUR NAME AND ADDRESS?

October, 1960

THE AMERICAN SCHOOL BOARD JOURNAL
400 North Broadway, Milwaukee 1, Wis.

Please ask the manufacturers, whose code numbers I have encircled, to send me the information, catalogs, or product literature offered in this issue.

ADVERTISING INDEX
100 103 104 109 1012 1015 1018 1021 1024 1027 1030 1033 1035 1037 1039 1041
101 104 107 1010 1013 1016 1019 1022 1025 1028 1031 1034 1036 1038 1040 1042
102 105 108 1011 1014 1017 1020 1023 1026 1029 1032

NEWS OF PRODUCTS FOR THE SCHOOLS
0155 0157 0159 0161 0163 0165 0167
0156 0158 0160 0162 0164 0166

CATALOGS & BOOKLETS
0170 0172 0174 0176
0171 0173 0175

Also information on _____

Name _____ School _____
Title _____ Zone _____ State _____
City _____
HAVE YOU SIGNED YOUR NAME AND ADDRESS?

USE THESE CARDS

The cards below are for your convenience in requesting product information, catalogs, and literature from advertisers and firms listed in this issue.

AMERICAN SCHOOL BOARD JOURNAL

P.O. Box No. 2068

MILWAUKEE 1, WISCONSIN

BUSINESS REPLY MAIL

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

Postage will be paid by:

FIRST CLASS

PERMIT NO. 1112

MILWAUKEE, WIS.

BUSINESS REPLY MAIL

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

Postage will be paid by:

FIRST CLASS

PERMIT NO. 1112

MILWAUKEE, WIS.

AMERICAN SCHOOL BOARD JOURNAL

P.O. Box No. 2068

MILWAUKEE 1, WISCONSIN

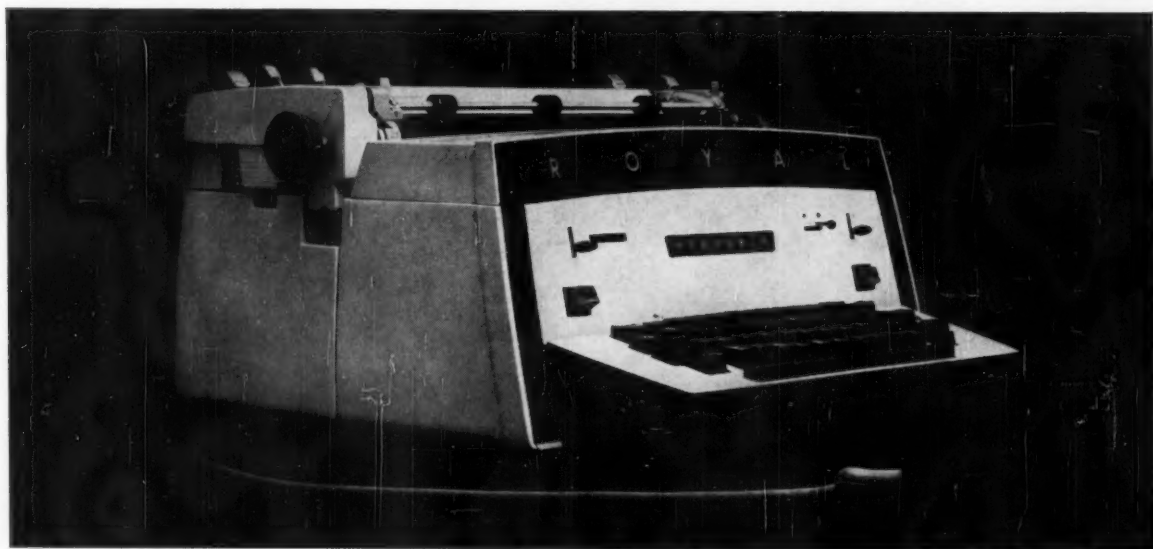
READER'S SERVICE SECTION

(Continued)

Code No.	Page No.	Code No.	Page No.
1030	Rockwell Mfg. Co., Drivetrainer Div. 42 & 43 Driver education	0158	John E. Sjöström Co. 58 Science furniture
1031	Royal Typewriter Company Div. Royal McBee Corp. 3rd cover Electric typewriters	0159	Desks of America, Inc. 58 Mobile demonstrator
1032	Safway Steel Products, Inc. 10 Telescoping gym seats	0160	Radiant Mfg. Co. 59 Projection screen
1033	Shwayder Brothers, Inc. 60 Folding chairs	0161	Alan Wood Steel Co., Penco Div. 59 Teacher's locker
1034	Taylor Company, Halsey W. 52 Drinking fountains	0162	American Playground Device Co. 59 Horizontal bars
1035	Torjesen, Inc. 63 Folding partitions	0163	Thomas Industries, Inc. 60 Lumi-Flo trolley
1036	United States Steel Corp., American Bridge Div. 51 Steel stadiums	0164	Smith System Mfg. Co. 60 Lunch table
1037	Up-Right Scaffolds 11 Telescoping aluminum tower	0165	Elkay Mfg. Co. 62 Sink and fountain
1038	Vogel-Peterson Co., Inc. 63 Wardrobe systems	0166	Meterflo Dispensers 62 Milk dispenser
1039	Wayne Iron Works 60 Indoor seating systems	0167	Edwin F. Guth Co. 62 Light fixtures
1040	Weber Costello Company 63 Chalkboard, chalk, erasers	NEW FILMS	
1041	Wells Lumber Co., J. W. 54 Northern maple	0168	Edwin L. Wiegand Co. 62
1042	Wilson Company, H. 58 Movie-Mover RP	0169	Rheem Califone Corp. 62
NEWS OF PRODUCTS FOR THE SCHOOLS		CATALOGS AND BOOKS	
0155	Buck Engineering Co., Inc. 58 Power panel	0170	Asphalt and Vinyl Asbestos Tile Institute 64
0156	The SoundScriber Corp. 58 Dictation unit	0171	Monroe Seating Co. 64
0157	Hampden Specialty Products Corp. 58 Folding chair	0172	Kewaunee Technical Furniture Company 64
		0173	The Skybrite Co. 64
		0174	Universal Bleacher Co. 64
		0175	Aluminum Window Mfgs. Assn. 64
		0176	Stark Ceramics, Inc. 64

SCHOOLS BUYING 45% MORE ROYAL ELECTRIC TYPEWRITERS IN 1960*

*May-June, 1960 compared to May-June, 1959 (the heavy school buying months.)



because schools as well as business firms can count on Royal's reputation for greater sturdiness, better service.

Schools all over the nation are opening in September with new Royal Electric Typewriters in business education classrooms. The reasons are simple:

1. Business firms are demanding more and more girls thoroughly trained on electric typewriters. (Business is buying more *Royal* Electrics than ever.)
2. Royal Electrics meet these school equipment require-

ments: They stand up under hard daily use . . . Royal service is immediately available . . . special Royal Electric features make learning easier.

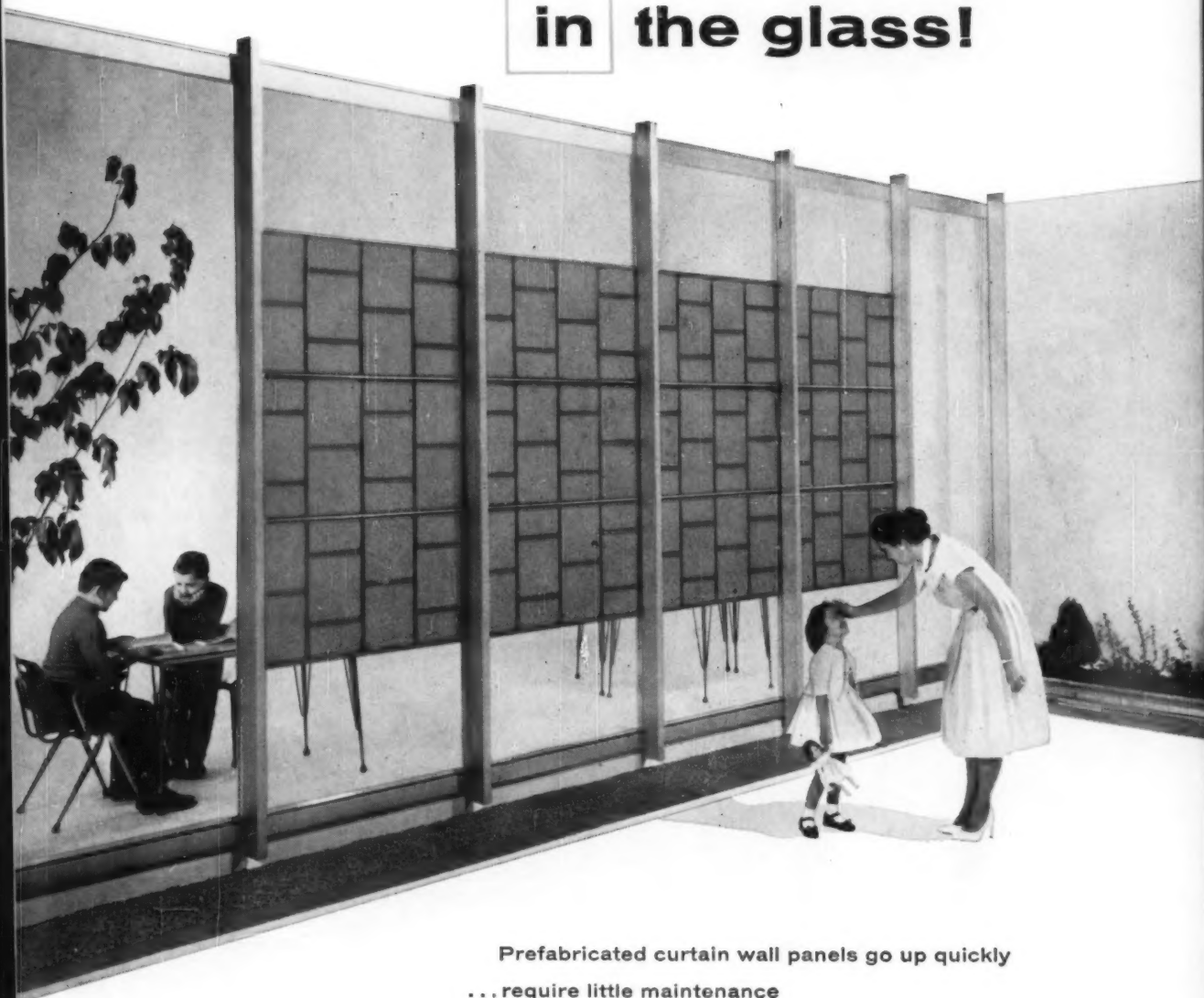
If you have not fully anticipated your classroom needs for this fall, call your Royal Representative for a free demonstration, at your convenience.

ROYAL[®]
ELECTRIC

ROYAL McBEE CORPORATION, MAKERS OF THE FAMOUS ROYAL LINE OF TYPEWRITERS SINCE 1906.

Thinlite Green Solar-selecting Panels reduce the sun's heat...yet let in the light,

and the color's in the glass!



Prefabricated curtain wall panels go up quickly
...require little maintenance

Now, there's a better way to reduce solar heat gain in classrooms, and improve thermal comfort. The answer is green solar-selecting Thinlite Curtain Wall panels. The cool green color is in the basic glass.

Like all Thinlite prismatic panels,


new, green panels reject hot sun rays, distribute light evenly and softly, even to far corners.

And, they add new beauty to school interiors and exteriors.

New, green light-controlling units are but one advantage of Thinlite,

the completely weatherproof, thoroughly insulated curtain wall.

For more information about this new light-controlling curtain wall system, write to Kimble Glass Company, subsidiary of Owens-Illinois, Toledo 1, Ohio.

THINLITE CURTAIN WALL
AN  PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO

